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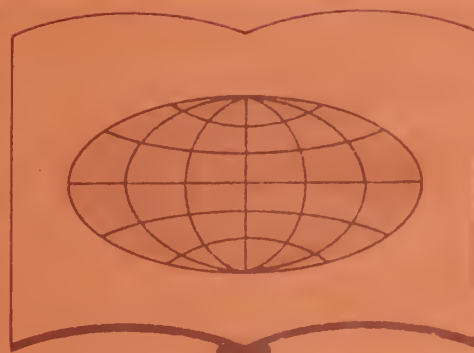
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# Pesticides DOCUMENTATION BULLETIN

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Volume 4  
November 22, 1968

Number 24



*Use Pesticides Safely*  
**FOLLOW THE LABEL**

U.S. DEPARTMENT OF AGRICULTURE



# PESTICIDES DOCUMENTATION BULLETIN

Volume 4  
November 22, 1968  
Number 24

A Bi-Weekly Publication of U.S. Department of Agriculture

## OBJECTIVES AND SCOPE

The *Pesticides Documentation Bulletin* is compiled by the National Agricultural Library's Pesticides Information Center to facilitate national research efforts in all aspects of pest control. This bi-weekly index to the literature includes coverage of diseases, insects, nematodes, parasites, weeds and other pests affecting plants, animals, man, our natural resources and other values in man's environment. Special emphasis is given to the literature on toxicological, physiological and epidemiological aspects of pests and their control by chemical biological and integrated methods.

For broader coverage of literature on agriculture and related subjects, please consult the *Bibliography of Agriculture*, a monthly publication of the National Agricultural Library.

## FORMAT

The *Bulletin* is a categorized bibliography, with citations arranged alphabetically by author under the following major subjects:

- 10 Entomology
- 20 Crop Protection
- 30 Livestock Protection
- 40 Commodity Protection
- 50 Environmental Contamination
- 55 Residues
- 60 Toxicology
- 65 Plant Physiology & Biochemistry
- 70 Chemistry
- 80 Engineering
- 90 Industry

**Citations:** Each citation consists of an accession number assigned serially with the last two digits representing the Bulletin's issue year, i.e. 3286-67. The citation number (minus the year) is used in all indices. Following the accession number is the full title of the article; all personal authors; an abbreviated journal title; volume, issue and inclusive page numbers; date of publication; language abbreviation, if other than English; and the National Agricultural Library's call number. Subject descriptors, patent or grant numbers, bibliographer's notes, and abstracts or extracts may follow each citation when appropriate.

**Subject Index:** Subject descriptors appear in the index followed by title arranged numerically by accession number. The Agricultural/Biological Vocabulary developed by the National Agricultural Library is used as a basic thesaurus of descriptors.

**Biographical Index:** Names of first authors are arranged alphabetically, followed by organizational affiliation and accession number.

**Author Index:** Names of personal authors are arranged alphabetically, followed by accession numbers of pertinent citations.

**Organizational Index:** Names of corporate authors or sponsoring organizations are arranged alphabetically followed by accession numbers of pertinent citations.

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In addition to the citations contained in the Bulletin, the Pesticides Information Center maintains two other files, the INTREDIS Register and the Herbicides Data File.

The INTREDIS Register is a computer data bank in the field of forest pathology. It contains title and author references to abstracted articles including subject, country, host plant genus or species, organisms causing the diseases, abstracting journal and year of publication. The computer search uses boolean parameters in any combination of elements listed.

The Herbicides Data File consists of reports on field tests conducted by the Crops Protection Research Branch, Crop Research Division, Agriculture Research Service. Each test record contains the following items of information:

- Compound Tested
- Company furnishing the compound
- Author or Investigator
- Test Sponsor
- Date
- Location
- Mode of Application
- Rates of Application
- Soil Types
- Carriers
- Crops or Weeds tested with phytotoxicity ratings
- Associated documentation

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## ACKNOWLEDGMENT

The Pesticides Information Center, National Agricultural Library, gratefully acknowledges the cooperation and assistance of the Department of Defense; Health, Education, and Welfare; and Interior; the Federal Committee on Pest Control, and state and industrial organizations in the development of the Center and preparation of this Bulletin. Special thanks are expressed to the Federal Committee on Pest Control for its suggestions and support. We hope the Bulletin will serve as an example of the effectiveness of interdepartmental cooperation and the speed with which effective services can be developed through a coordinated and cooperative interdepartmental effort.

Use of funds for printing this publication approved by the Director of the Bureau of the Budget (May 23, 1968).

PLEASE GIVE COMPLETE BIBLIOGRAPHIC INFORMATION AS IT APPEARS IN THIS PUBLICATION FOR EACH ITEM REQUESTED.

This publication reports research involving pesticides. It does not contain recommendations for their use, nor does it imply that the uses discussed here have been registered. All uses of pesticides must be registered by appropriate State and/or Federal agencies before they can be recommended.

**CAUTION:** Pesticides can be injurious to humans, domestic animals, desirable plants, and fish or other wildlife—if they are not handled or applied properly. Use all pesticides selectively and carefully. Follow recommended practices for the disposal of surplus pesticides and pesticide containers.

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## ENTOMOLOGY

- 21583-68**  
A METHOD FOR COLLECTING FEATHER LICE (MALLOPHAGA).  
D B Crockett  
*Kans Entomol Soc J* 40(2):192-194  
Apr 1967 420 K13  
Anoplura, Ethyl acetate, Fumigants, Predatory birds, Research.
- 21584-68**  
APPLICATION OF SCANNING MICROSCOPY IN THE STUDY OF VIRUS TRANSMISSION OF APHIDS.  
G A De Zoeten  
*J Virology* 2(7):745-751  
Jul 1968 QR360.J6  
Aphididae, Insect vectors, Morphology, Plant disease transmission, Plants, Research, Stylets.
- 21585-68**  
THE RESPONSE OF RHAGOLETIS POMONELLA (WALSH) ADULTS AND OTHER INSECTS TO TRAP BOARDS BAITED WITH PROTEIN HYDROLYSATE BAITS.  
A J Howitt L J Connor  
*Entomol Soc Ontario Proc* 95:134-136  
1964 420 ON8  
Insect pests, Proteins, Research, Rhagoletis pomonella, Tables (data), Traps.
- 21586-68**  
FLEAS FOUND ON RABBITS AND OTHER MAMMALS FROM A PASTURE.  
A R Mead-Briggs R J C Page  
*Entomol Mon Mag (SER 4)* 99(277-9 JAN-MAR):19-22  
1963 421 EN86  
Insect behavior, Mammals, Oryctolagus cuniculus, Pastures, Research, Tables (data), Traps.
- 21587-68**  
A FLIGHT TRAP FOR COLLECTING LIVING INSECTS.  
W W Nijholt J A Chapman  
*Can Entomol* 100(11):1151-1153  
Nov 1968 421 C16  
Insect collecting equipment, Insect flight, Insect traps, Scolytidae.
- 21588-68**  
RESISTANCE PATTERN IN FOUR STRAINS OF INSECTICIDE-RESISTANT GREEN RICE LEAF-HOPPER, NEPHOTETTIX CINCTICEPS UHLER, COLLECTED IN FIELDS.  
K Ozaki Y Kurosu  
*Jap J Appl Entomol Zool* 11(4):145-149  
Dec 1967 475 J27  
Chemicals, Insect control, Insecticide resistant insects, Insecticides, Nephotettix cincticeps. English summary
- 21589-68**  
COCKROACH INSECTICIDES. HOW REPELLENT ARE THEY.  
B J Smittle G S Burden W A Banks  
*Pest Contr* 36(11):9-10  
Nov 1968 449.8 EX8  
Blattella germanica, Insect control, Insecticides, Laboratories, Mortality, Research.
- 21590-68**  
MILKY DISEASE BACTERIA.  
K H Steinkraus H Tashiro  
*Appl Microbiol* 15(2):325-333 REF  
Mar 1967 448.3 APS  
Aging, Bacteria, Culture media, Geography, Insect names, Milky disease, Physiology, Research, Scarabaeidae.
- 21591-68**  
INFECTION OF CULTURED SILKWORM EMBRYOS WITH THE CYTOPLASMIC-POLYHEDROSIS VIRUS. (JA)  
T Takam H Sugiyama T Kitazawa T Kanda  
*Jap J Appl Entomol Zool* 11(4):182-186  
Dec 1967 475 J27

Anatomy, Bombyx mori, Culture media, Cytoplasm, Injections, Polyhedroses, Research, Virus diseases (insects).

- 21592-68**  
TERMITES- ROASTED OR AS A SOUP. (GE)  
P Valentin  
*Kosmos* 64(10):424-425  
Oct 1968 474 K842  
Food, Insect behavior, Insect traps, Proteins, Temperature, Termites, Vitamins, Weather.
- 21593-68**  
ALDRIN, DIELDRIN, ENDRIN, AND CHLORDANE PERSISTENCE--A 3-YEAR STUDY.  
G Winnett J P Reed  
*Pest Mont J* 2(3):133-136  
Dec 1968 S0B951.0A10P41  
Aldrin, Chlordane, Dieldrin, Endrin, Insect pests, Pest control, Pesticides, Soils, Tables (data).

## SYSTEMATICS

- 21594-68**  
SOME ORTHOPTEROID INSECTS OF THE ORDERS BLATTOPTERA, ORTHOPTERA, AND DERMAPTERA FROM AFGHANISTAN. (RUS)  
G Ja Bey-Bienko  
*Acta Ent Bohemoslov* 64(6):407-438 REF  
20 Nov 1967 420 C33  
Blattidae, Catalogs, Dermaptera, Insect taxonomy, Orthoptera, Zoogeography. English and Czech abstract
- 21595-68**  
NOTES ON MALLOPHAGA ON THE ASIATIC WILD ASS AND BISONS.  
D I Blagoveschenskiy  
*Entomol Rev* 46(4, OCT-DEC):513-515  
Dec 1967 421 R322AE  
Bovicola, Insect taxonomy, Parasitic insects, Wildlife. Russian journal pp. 860-863
- 21596-68**  
A NEW SPECIES OF BLACK FLY OF THE GENUS GYMNOPAIS (DIPTERA, SIMULIIDAE) FROM THE ALTAY.  
S I Bobrova  
*Entomol Rev* 46(4, OCT-DEC):529-530  
Dec 1967 421 R322AE  
Insect taxonomy, Simuliidae. Russian journal pp. 884-886
- 21597-68**  
PSEPHENUS (COLEOPTERA: PSEPHENIDAE) PARASITIZED BY A NEW CHALCIDOID (HYMENOPTERA: EULOPHIDAE). I. DESCRIPTION OF THE PARASITE.  
B D Burkes  
*Entomol Soc Amer Ann* 61(2):450-452  
15 Mar 1968 420 EN82  
Aquatic insects, Chalcididae, Eulophidae, Insect taxonomy, Parasitic insects, Psephenivorus mexicanus, Psephenus texanus.
- 21598-68**  
A FAUNISTIC STUDY OF PHILIPPINE APHIDS (APHIDIDAE, HOMOPTERA).  
V J Calilung  
*Philippine Agr* 51(2):93-170 REF  
Jul 1967 25 P542  
Aphididae, Insect identification, Insect taxonomy, Zoogeography.
- 21599-68**  
A NEW GENUS AND SPECIES OF APHIDIDAE (HOMOPTERA) ON PREMNA ODORATA BLANCO.  
V J Calilung  
*Philippine Agr* 51(2):89-92  
Jul 1967 25 P542  
Aphididae, Insect taxonomy.
- 21600-68**  
CONTRIBUTION TO THE FAUNA OF THE CONGO (BRAZZAVILLE). MISSION A. VIL-

- LIERS AND A. DESCARPENTRIES. L. ORTHOPTERA GRYLLODEA. (FR)  
L. Chopard  
*Inst Fondamental Afr Noire Bull Ser A Sci Natur (SER A)* 29(2):758-776  
Apr 1967 515 D14  
Catalogs, Gryllidae, Insect taxonomy, Zoogeography.
- 21601-68**  
AN UNDESCRIBED PHYTOSEIUS FROM FLORIDA AND MEXICO. (ACARINA: PHYTOSEIIDAE).  
D De Leon  
*Entomol News (philadelphia)* 71(10):269-270  
Dec 1960 421 EN88  
Insect identification, Insect taxonomy, Phytoseius. Research.
- 21602-68**  
THE TREEHOPPERS OF WISCONSIN IN RELATION TO THE TENSION ZONE (HOMOPTERA, MEMBRACIDAE).  
C J Dennis  
*Amer Midland Natur* 81(1):236-242 MAP  
Jan 1969 410 M58  
Catalogs, Insect ecology, Membracidae, Zoogeography.
- 21603-68**  
STANDARD NAMES FOR COMMON INSECTS.  
*New Zeal J Agr* 114(1):97-99, 101 (CONT.)  
Jan 1967 23 N48J  
Catalogs, Insect names.
- 21604-68**  
STATUS OF ZODION ZEBRINUM, Z. AURICAUDATUM, AND Z. ALBONOTATUM (DIPTERA: CONOPIIDAE).  
B A Freeman  
*Entomol Soc Amer Ann* 61(2):276-278 REF  
15 Mar 1968 420 EN82  
Conopidae, Diptera, Insect taxonomy. Synonymy and misidentification
- 21605-68**  
WESMAELIUS BALTICUS TJEDER, 1931 (NEUROPTERA, PLANIPENNIN) NEW TO NORWAY.  
L Greve  
*Norsk Entomol Tidsskr* 14(2):68-69 MAP  
1967 421 N812  
Insect taxonomy, Neuroptera, Zoogeography.
- 21606-68**  
NOTES ON ECPHYLUS FORST. AND DESCRIPTION OF TWO NEW SPECIES (ICHNEUMONIDAE, BRACONIDAE, DORYCTINAE).  
K J Hedqvist  
*Entomol Tidsskr* 88(1-2):66-71  
1967 421 EN891  
Braconidae, Insect taxonomy, Zoogeography.
- 21607-68**  
A NUMERICAL TAXONOMIC STUDY OF THE GENUS PSOROPHORA (DIPTERA: CULICIDAE).  
J A Hendrickson R R Sokal  
*Entomol Soc Amer Ann* 61(2):385-392 REF  
15 Mar 1968 420 EN82  
Aedes, Culicidae, Insect taxonomy, Psorophora.  
Abstract: Study of phenetic relationships among 29 species of culture mosquitoes based on 158 adult characters. findings are reported as phenograms based on correlation and distance coefficients, and as graphs representing the positions of the species in a 3-dimensional factor space.
- 21608-68**  
THE MALE OF NEOASCIA PETSAMOENSIS KANERVO (DIPT., SYRPHIDAE) WITH REMARKS ON THE FEMALES AND THE DISTRIBUTION OF THE SPECIES.  
H Hippa  
*Suomen Hyonteistieteellinen Aikakauskir Ann Entomol Fenn* 33(4):256-260  
20 Dec 1967 421 SU7

# ENTOMOLOGY

21609-68

Insect taxonomy, Syrphidae, Zoogeography.

**21609-68**  
A REDESCRIPTION OF NEOASCIA AENEA MEIG. (DIPT., SYRPHIDAE).

H Hippa

*Suomen Hyönteistieteellinen Aikakauskirj Ann*

*Entomol Fenn* 33(2):113-117 MAP REF

30 Aug 1967 421 SU7

Insect taxonomy, Syrphidae, Zoogeography.

**21610-68**  
COLEOPTERA IN SOUTHERN NORDLAND.

C Johnson

*Norsk Entomol Tidsskr* 14(2):70-82 MAP

1967 421 N812

Catalogs, Coleoptera, Insect taxonomy, Zoogeography.

A catalog of Coleoptera species found in southern Norway in the summer of 1965 is given.

**21611-68**  
HADRODACTYLUS BRANDERI SP. N. (HYM., ICHNEUMONIDAE) FROM FINLAND.

R Jussila

*Suomen Hyönteistieteellinen Aikakauskirj Ann*

*Entomol Fenn* 33(3):148-151

02 Nov 1967 421 SU7

Ichneumonidae, Insect taxonomy.

**21612-68**  
CATALOGUE ON THE INDIAN DERMAPTERA.

V C Kapoor

*Agra Univ J Res Sci* 16(PT 1):1-42

Jan 1967 513 AG8

Catalogs, Dermaptera, Insect taxonomy, Zoogeography.

**21613-68**  
CATALOGUE ON THE INDIAN DERMAPTERA.

V C Kapoor

*Agra Univ J Res Sci* 16(PT:1):1-42

Jan 1967 513 AG8

Catalogs, Dermaptera, Insect taxonomy.

**21614-68**  
SOME ANATOMICAL DIFFERENCES OF POSSIBLE TAXONOMIC VALUE IN THE FEMALE REPRODUCTIVE ORGANS OF SITOPHILUS (CURCULIONIDAE: COLEOPTERA).

N R Khan A J Musgrave

*Can Entomol* 100(11):1226-1228

Nov 1968 421 C16

Anatomy, Coleoptera, Curculionidae, Sitophilus, Taxonomy.

**21615-68**  
REVISION OF SPHAEROCERA, WITH DESCRIPTION OF A NEW GENUS AFROMYIA (DIPTERA: SPHAEROCERIDAE).

K C Kim

*Entomol Soc Amer Ann* 61(2):296-312 REF

15 Mar 1968 420 EN82

Afromyia, Insect identification, Insect taxonomy, Sphaerocera, Sphaerocera richardsi, Sphaerocera tuberculosa, Zoogeography.

**21616-68**  
TWO NEW SPECIES OF NOCTUID MOTHS OF THE GENUS PALLUPERINA HMPs. (LEPIDOPTERA, NOCTUIDAE).

Z F Klyuchko

*Entomol Rev* 46(4,OCT-DEC):519-521

Dec 1967 421 R322AE

Insect taxonomy, Noctuidae. Russian journal pp. 869-872

**21617-68**  
THE ROLE OF CHEMICALS IN THE GENERAL INSECT CONTROL PICTURE.

E F Knipling

*Entomol Soc Amer Bull* 14(2):102-107 REF

Jun 1968 423.9 EN8

Bacillus thuringiensis, Chemicals, Chemosterilants, Heliothis zea, Insect control, Insecticides, Population.

# BIBLIOGRAPHY

**21618-68**  
NEW AND LITTLE-KNOWN SPECIES OF ALEYRODIDS (HOMOPTERA, ALEYRODOIDEA) FROM CRIMEA.

V G Korobitsin

*Entomol Rev* 46(4,OCT-DEC):510-512

Dec 1967 421 R322AE

Aleyrodidae, Insect taxonomy. Russian journal pp. 857-859

**21619-68**  
A NEW EMPIDID, PLATYPALPUS CAUCASICUS, SP. N. (DIPTERA, EMPIDIDAE), FROM NORTH CAUCASUS.

V G Kovalev

*Entomol Rev* 46(4,OCT-DEC):531-532

Dec 1967 421 R322AE

Empididae, Insect taxonomy. Russian journal pp. 887-889

**21620-68**  
A REVISION OF THE GENUS BLISSUS (HETEROPTERA: LYGAEIDAE) IN EASTERN NORTH AMERICA.

D E Leonard

*Entomol Soc Amer Ann* 61(2):239-250 REF

15 Mar 1968 420 EN82

Blissus, Heteroptera, Insect taxonomy, Lygaeidae.

**21621-68**  
DATA ON THE CADDISFLY (TRICHOPTERA) FAUNA OF SIBERIA AND THE FAR EAST.

I M Levanidova

*Entomol Rev* 46(4,OCT-DEC):467-470

Dec 1967 421 R322AE

Catalogs, Insect taxonomy, Trichoptera, Zoogeography. Russian journal pp. 793-798

**21622-68**  
THREE NEW SPECIES OF AFRICAN GABRIUS (COL. STAPHYLINIDAE PHILONTHINI). (FR )

L Levasscur

*Inst Fondamental Afr Noire Bull Ser A Sci Natur*

(SER A)29(2):653-656

Apr 1968 515 D14

Insect taxonomy, Staphylinidae.

**21623-68**  
NEW RECORDS OF CARABIDAE (COLEOPTERA) FROM NORTHUMBERLAND.

M L Luff

*Entomologist (london)* 101(1264):193-195

Sep 1968 421 EN8

Carabidae, Coleoptera, Taxonomy, Zoogeography.

**21624-68**  
A REVIEW OF TWELVE APHID SPECIES DESCRIBED AS NEW BY EDITH M. PATCH.

M E MacGillivray

*Entomol Soc Amer Ann* 61(2):338-362 REF

15 Mar 1968 420 EN82

Acyrtosiphon, Aphididae, Dactynotus, Insect morphology, Insect taxonomy, Macrosiphum, Neocorylobium.

**21625-68**  
GALL MIDGES OF THE USSR. 7. NEW SPECIES OF NONCECIDOGENOUS GALL MIDGES OF THE TRIBE OLIGOTROPHINI (DIPTERA, CECIDOMYIIDAE).

B M Mamayev

*Entomol Rev* 46(4,OCT-DEC):522-528 REF

Dec 1967 421 R322AE

Catalogs, Cecidomyiidae, Insect taxonomy. Russian journal pp. 873-883

**21626-68**  
A NEW SPECIES OF FAHRENHOLZIA (ANOPLURA: HOPLOPLEURIDAE) FROM TEXAS, WITH A KEY TO THE SPECIES OF THE GENUS AND A LIST OF THEIR KNOWN HOSTS.

B McDaniel

*Entomol Soc Amer Ann* 61(2):402-405

15 Mar 1968 420 EN82

Anoplura, Fahrenholzia, Hoplopleuridae, Insect taxonomy, Parasitic insects, Rodents.

**21627-68**  
SIX NEW SPECIES AND ONE NEW NAME OF SOME DIPTEROUS FAMILIES FROM JAPAN.

M Miyatake

*Shikoku Entomol Soc Trans* 8(4):105-114

May 1965 420 SH6

Insect identification, Insect taxonomy, Research, Xylophagus matsumurai, Xylophagus omogenis, Xylophagus albopilosus, Pachygaster japonica, Solva fuscitarsis, Solva shikokuana are insects listed.

**21628-68**  
NEW PALEARCTIC SPECIES OF THE SUBFAMILY MEDETERINAE (DIPTERA, DOLICHOPODIDAE).

O P Negrobov

*Entomol Rev* 46(4,OCT-DEC):533-544

Dec 1967 421 R322AE

Catalogs, Dolichopodidae, Insect taxonomy. Russian journal pp. 890-908

**21629-68**  
ON PRESERVING BEETLE LARVAE. (NO )

T Palm

*Opusc Entomol* 33(1-2):64-68

1968 421 OP7

Coleoptera, Insect preservation, Larvae, Methodology. English abstract

**21630-68**  
GENERA AND SPECIES OF THE DERMAPTERA. 8 EUDOHRNINAE, NEOLOBOPHORINAE, ANCIROGAS-TRINAE, DIAPERASTICINAE AND ANECHURINAE (FORFICULIDAE).

E J Popham

*Entomologist (london)* 101(1264):196-201

Sep 1968 421 EN8

Dermaptera, Taxonomy, Zoogeography. Article includes: Eudohrninae, Neolobophorinae, Ancistrogastriinae, Diaperasticinae, Anechurinae.

**21631-68**  
ON STENUS (PARASTENUS) ALPICOLA FAUVEL AND OTHER DIVERGENTLY EVOLVED PALEARCTIC PARASTENUS-SPECIES (COL., STAPHYLINIDAE). 44. CONTRIBUTION TO THE KNOWLEDGE OF THE STENIDIS. (GE )

V Puthz

*Suomen Hyönteistieteellinen Aikakauskirj Ann*

*Entomol Fenn* 33(4):226-256 MAP REF

20 Dec 1967 421 SU7

Insect evolution, Insect taxonomy, Staphylinidae, Zoogeography.

**21632-68**  
A STROBOSCOPIC DEVICE FOR THE STUDY OF FLIGHT IN VERY SMALL INSECTS.

D M Robinson

*Entomol Mon Mag (SER 4)99(277-9 JAN-MAR):41-42*

1963 421 EN86

Equipment, Insect flight, Insects, Research.

**21633-68**  
TROMBICULID MITES (ACARIFORMES, TROMBICULIDAE) FROM THE CRIMEA.

Ye G Schluger F N Vshivkov

*Entomol Rev* 46(4,OCT-DEC):545-549

Dec 1967 421 R322AE

Catalogs, Insect taxonomy, Trombiculidae. Russian journal pp. 909-915

**21634-68**  
TRICHOPTERA COLLECTED IN SOR-TRON-DELAG COUNTY. (NO )

J O Solem

*Norsk Entomol Tidsskr* 14(2):65-67 REF

1967 421 N812

Catalogs, Insect taxonomy, Trichoptera, Zoogeography. English abstract

**21635-68**  
MEDOCOSTIDAE--A NEW FAMILY OF CIMICOMORPHAN HETEROPTERA BASED ON A NEW GENUS AND TWO NEW SPECIES



# FROM TROPICAL AFRICA . I. DESCRIPTIVE PART.

P Stys

*Acta Ent Bohemoslov* 64(6):439-465

20 Nov 1967 420 C33

Heteroptera, Insect taxonomy. English and Czech abstracts

## 21636-68

FINNISH ENTOMOLOGICAL LITERATURE PUBLISHED IN 1966, INCLUDING ECONOMIC ENTOMOLOGY AND CONTROL OF INSECT PESTS.

N A Vappula

*Suomen Hyonteistieteellinen Aikakauskirj Ann*

*Entomol Fenn* 34(1A):1-22 REF

28 Mar 1968 421 SU7

Bibliography, Catalogs, Economic entomology, Entomology, Insect control, Literature.

## 21637-68

ENDOPHYTUM ANEMONES (HERING) IN FINLAND (HYM., TENTHREDINIDAE).

V Vikberg

*Suomen Hyonteistieteellinen Aikakauskirj Ann*

*Entomol Fenn* 33(4):265-268 REF

20 Dec 1967 421 SU7

Insect taxonomy, Leaf miners, Tenthredinidae.

## 21638-68

ON THE SYSTEMATIC POSITION OF ICHNEUMONIDS OF THE GENERA ODINOPHORA FORSTER AND EXETASTES GRAVENHORST AND DESCRIPTIONS OF NEW SPECIES (HYMENOPTERA, ICHNEUMONIDAE).

G A Viktorov

*Entomol Rev* 46(4,OCT-DEC):516-518 REF

Dec 1967 421 R322AE

Catalogs, Ichneumonidae, Insect taxonomy. Russian journal pp. 864-868

## 21639-68

CONTRIBUTION TO THE FAUNA OF THE CONGO (BRAZZAVILLE). MISSION A. VILLIERS AND A. DESCARPENTRIES. XLVIII. HEMIPTERA PYRRHOCORIDAE. (FR)

A Villiers

*Inst Fondamental Afr Noire Bull Ser A Sci Natur*

29(1):370-374

Jan 1967 515 D14

Catalogs, Insect taxonomy, Pyrrhocoridae, Zoogeography.

## 21640-68

EXAMINATION OF AFRICAN REDUVIIDAE. II. HARPACTORINAE. GENUS NAGUSTA STAL. (FR)

A Villiers

*Inst Fondamental Afr Noire Bull Ser A Sci Natur*

(SER A):29(2):657-694

Apr 1967 515 D14

Catalogs, Insect taxonomy, Reduviidae, Zoogeography.

## 21641-68

CONTRIBUTION TO THE FAUNA OF THE CONGO (BRAZZAVILLE). MISSION A. VILLIERS AND A. DESCARPENTRIES. LIV. HEMIPTERA PLATASPIDAE. (FR)

L Villiers

*Inst Fondamental Afr Noire Bull Ser A Sci Natur*

(SER A):29(2):807-814

Apr 1967 515 D14

Catalogs, Heteroptera, Insect taxonomy, Zoogeography.

## 21642-68

A COLLECTION OF SPIDERS FROM SON NORWAY.

P F Waaler

*Norsk Entomol Tidsskr* 14(2):91-93

1967 421 N812

Catalogs, Insect ecology, Insect taxonomy, Spiders.

## 21643-68

WHAT IS A BEE .

G M Walton

*New Zeal J Agr* 114(1):53

Jan 1967 23 N48J

Apidae, Bees, Economic entomology, Hymenoptera, Insect ecology, Insect identification.

A brief description is given of New Zealand bees and wasps, including morphology, ecology and economic values.

## 21644-68

MIMICRY IN PLANTS AND ANIMALS.

W Wickler

255P. MCGRAW-HILL, NEW YORK

1968 QH546.W53

Animals, Insects, Mimicry, Plants. Translated from German by R. D. Martin. includes insects.

## 21645-68

HETEROPTERA BEATEN FROM BLACKCURRANTS AT LONG ASHTON RESEARCH STATION IN 1967.

J A Wightman

*Entomologist (london)* 101(1264):202-204

Scp 1968 421 EN8

Cimicidae, Currants, Heteroptera, Miridae, Pentatomidae, Taxonomy, Tingidae, Zoogeography.

## 21646-68

GEOMETRIDAE, NEW FOR TURKEY, DISCOVERED IN 1939-42 BY J. ROMIEUX.

E P Wiltshire

*Entomol Gesell Basel* 14(6,NOV-DEC):151-153

Dec 1964 Q0L461.0E58

Entomology, Geometridae, Insect identification, Insect taxonomy. German summary

## 21647-68

MORPHOLOGY OF THE MALE PINK SUGARCANE MEALYBUG, SACCHARICOCCUS SACCHARI CKLL. (PSEUDOCOCCIDAE: HOMOPTERA)--PART II. APTEROUS FORM.

R L Yadava

*Agra Univ J Res Sci* 16(PT 1):101-133

Jan 1967 513 AG8

Insect morphology, Saccharicoccus sacchari.

## 21648-68

A NEW GENUS AND THREE NEW SPECIES OF STONEFLIES (PLECOPTERA) FROM CAUCASUS AND CRIMEA.

L A Zhil'tsova

*Entomol Rev* 46(4,OCT-DEC):505-509

Dec 1967 421 R322AE

Insect taxonomy, Plecoptera. Russian journal pp. 850-856

## PHYSIOLOGY AND BIOCHEMISTRY

### 21649-68

PORPHYRINIA PURPURINA HB. (LEP., NOCTUIDAE), NEW FOR FINLAND. (FI)

J Alvas

*Suomen Hyonteistieteellinen Aikakauskirj Ann*

*Entomol Fenn* 33(2):112-113

30 Aug 1967 421 SU7

Noctuidae, Zoogeography.

### 21650-68

MORTALITY DUE TO BACILLUS THURINGIENSIS IN POST-LARVAL STAGES OF SOME LEPIDOPTERA.

T A Angus

*Entomol Soc Ontario Proc* 95:133-134

1964 420 ON8

Bacillus thuringiensis, Bacteria, Larvae, Lepidoptera, Mortality, Research, Spraying.

### 21651-68

CONTRIBUTION TO STUDIES OF ZEUZERA 'ZEUZERA PYRINA' L. (LEPIDOPTERA COSSIDAE) IN THE LOWER VALLEY OF THE RHINE: THE LIFE CYCLE AND BIOLOGICAL CHARACTERISTICS OF DIFFERENT STAGES. (FR)

H Audemard

*Rev Zool Agr Appl* 66(7-9, 3RD

TRIMESTER):65-91 REF

1967 410.9 SO12

Cossidae, Insect biology, Life cycle, Zeuzera pyrina.

### 21652-68

CROP POLLINATION AND THE FLOWER RELATIONSHIPS OF THE WILD BEES OF LUDHIANA, INDIA (HYMENOPTERA: APOIDEA).

S W T Batra

*Kans Entomol Soc J* 40(2):164-177

Apr 1967 420 K13

Aging, Bees, Climate, Crops, Insect behavior, Insect identification, Pollination.

### 21653-68

SLOW AND SPIKE POTENTIALS RECORDED FROM RETINULA CELLS OF THE HONEYBEE DRONE IN RESPONSE TO LIGHT.

F Bauman

*J Gen Physiol* 52(6):855-875 REF

Dec 1968 447.8 J822

Apidae, Apis mellifera, Bees, Insect physiology, Light, Phototropism, Retina.

### 21654-68

HYMENOPTERA ASSOCIATED WITH ELM BARK BEETLES IN WYTHAM WOOD, BERKS.

R A Beaver

*Soc Brit Entomol Trans* 17(PT 6):141-150 REF

Aug 1967 420 SO15

Hymenoptera, Parasitic insects, Scolytidae, Scolytus multistriatus.

### 21655-68

LARVAL DIAPAUSE IN THE TICK IXODES RICINUS L. AND ITS DEPENDENCE ON EXTERNAL CONDITIONS. IV. INTERACTION BETWEEN EXOGENOUS AND ENDOGENOUS FACTORS IN THE REGULATION OF LARVAL DIAPAUSE.

V N Belozorov

*Entomol Rev* 46(4,OCT-DEC):447-451 REF

Dec 1967 421 R322AE

Diapause, Environment, Insect biology, Ixodes ricinus, Larvae, Metamorphosis, Photoperiodism, Temperature. Russian journal pp. 760-768

### 21656-68

WEATHER CONDITIONS AND DAILY ACTIVITY OF DRAGONFLIES (ODONATA).

B F Belyshev

*Entomol Rev* 46(4,OCT-DEC):457-460

Dec 1967 421 R322AE

Insect ecology, Insect flight, Odonata, Weather. Russian journal pp. 778-783

### 21657-68

INTRODUCING QUEEN BEES.

F S Benecke

*Agr Gaz New S Wales* 78(PT 9):513-516

Scp 1967 23 N472

Apiculture, Methodology, Queen bees.

Methods of introducing queen bees into bee colonies in Australia are discussed.

### 21658-68

DEVELOPMENT OF SAMPLING TECHNIQUES AND LIFE TABLES FOR THE FIR ENGRAVER SCOLYTUS VENTRALIS (COLEOPTERA: SCOLYTIDAE).

A A Berryman

*Can Entomol* 100(11):1138-1147 REF

Nov 1968 421 C16

Aging, Coleoptera, Population, Sampling (statistics), Scolytidae, Scolytus ventralis.

### 21659-68

INFLUENCE OF SOIL HUMIDITY ON THE LOCATION IN DEPTH OF THE GALLEY BEET WORM DURING A FAVORABLE SEASON. (FR)

J Biernaux

*Gembloux Inst Agron Etat Bull* 3(2):234-240

1968 105.1 G285

Diplopoda, Insect ecology, Soil moisture, Sugar beets.

Millipedes of sugar-beets (Blaniulus guttulatus

21660-68

Bosc. and Archiboreaiulus pallidus Br. Bx.) avoid soils with less than 110 water content but readily dwell in soils with more than 130 water content.

21660-68

# OBSERVATIONS ON THE HIBERNATION OF PSILA ROSAE F. (FR)

J Biernaux

Gembloux Inst Agron Etat Bull 3(2):241-248

REF

1968 105.1 G285

Diapause, Larvae, Metamorphosis, Psila rosae, Pupae. English, German and Afrikaan abstract

The hibernating larvae of Psila rosae developed into adults faster than the diapausing pupae.

21661-68

# BREEDING INSECTS WITH ARTIFICIAL FOOD. (GE)

M Boness

Umschau 68(18):561

29 Aug 1968 474 UM7

Breeding, Food, Insect pests, Insect rearing, Leaves, Methodology, Plant extracts.

21662-68

# THE METHOD OF ACTION OF THE DARK AND LIGHT PHASES ON THE PRODUCTION OF WINGED GYMNOPORES OF DYSAPHIS PLANTAGINAE PASS. (HOMOPTERA, APHIDIDAE). (FR)

L Bonnemaison

Acad Sci Compt Rend Ser D Sci Nat (SER D)267(2, 2ND SEMESTER):218-220

08 Jul 1968 505 P21

Diurnal rhythm, Dysaphis plantaginea, Hormones, Insect physiology, Wings (insects).

21663-68

# NOTES ON BIVOLTINISM IN THE LESSER PEACH TREE BORER, SYNANTHEDON PICTIPES (G AND R).

H R Boyce

Entomol Soc Ontario Proc 95:139

1964 420 ON8

Environment, Larvae, Plant cuttings, Reports, Research, Synanthedon pictipes.

21664-68

# THE LARVAE AND PUPAE OF THE BRITISH CYLINDROTOMINAE AND LIMONIINAE (DIPTERA, TIPULIDAE).

A Brindle

Soc Brit Entomol Trans 17(Pt 7):151-216 REF

Aug 1967 420 SO15

Catalogs, Insect ecology, Insect morphology, Larvae, Pupae, Tipulidae.

21665-68

# EFFECTS OF ALTERING THE COMPOSITION AND VOLUME OF THE HAEMOLYMPH ON WATER INGESTION OF THE BLOWFLY, LUCILIA CUPRINA.

L B Browne

J Insect Physiol 14(11):1603-1620

Nov 1968 421 J825

Consumption, Hemolymph, Insect physiology, Lucilia cuprina, Research, Sodium chloride, Water.

21666-68

# BIOSYNTHESIS AND OCCURRENCE OF FREE AMINO ACIDS IN EGGS OF THE GRASSHOPPER, AULOCARA ELLIOTTI.

D E Bunde J H Pepper

J Insect Physiol 14(11):1635-1649 REF

Nov 1968 421 J825

Amino acids, Aulocara ellioti, Chromatography, Culture media, Insect eggs, Insect rearing, Metabolism, Population, Radioactivity.

21667-68

# SIGNIFICANCE OF THE TIME FACTOR IN THE IRRADIATION OF IMAGO INSECTS (EXPERIMENTS ON GRANARY WEEVILS).

I B Bychkovskaya G K Ochinskaya T P Volynova

Radiobiology 8(2):93-98 REF

Nov 1968 442.8 R11AE

Chemical control (insects), Cureulionidae, Insect physiology, Irradiation, Larvae, Mortality, Time. Russian journal- vol.8(2):235-238, 1968

21668-68

# THE AUSTRALIAN PLAGUE LOCUST CHORTICETES TERMINIFERA.

M Casimir

Agr Gaz New S Wales 78(Pt 11):626-632

Nov 1967 23 N472

Chemical control (insects), Chortocetes terminifera, Insect outbreak forecasting, Life cycle, Lindane, Spraying.

The life cycle and habits of Chortocetes terminifera, the Australian plague locust and its chemical control and outbreak forecasting are discussed.

21669-68

# ECOLOGY OF GOMPHOMASTAX CLAUATA PLOTNIKOV C. BOL. (ORTHOPTERA EUMASTACIDAE).

M Ye Chernyakhovskiy

Entomol Rev 46(4, OCT-DEC):452-456

Dec 1967 421 R322AE

Acrididae, Food habits, Insect behavior, Insect ecology, Insect physiology, Life cycle, Zoogeography. Russian journal pp. 769-777

21670-68

# THE RELIABILITY OF A METHOD OF SAMPLING STREAM INVERTEBRATES.

F M Chutter R G Noble

Arch Hydrobiol 62(1):95-103

May 1966 410 AR28

Aquatic insects, Ecology, Invertebrates, Methodology, Sampling (statistics), Surveys.

21671-68

# THE MODIFICATION OF ADULT LIFE SPAN IN BRACON HEBETOR (HYMENOPTERA: BRACONIDAE) BY IRRADIATION IN NITROGEN.

A M Clark R E Smith

Entomol Soc Amer Ann 61(2):541-542 REF

15 Mar 1968 420 EN82

Air, Bracon hebetor, Braconidae, Gamma rays, Insect behavior, Longevity, Nitrogen, X-rays.

21672-68

# LOCALIZATION AND DESCRIPTION OF STRETCH RECEPTORS AT THE LEVEL OF THE TIBIO-FEMORAL JOINT OF THE JUMPING LEG OF THE CRICKET, SCHISTOCERCA GREGARIA. (FR)

J P Coillot J Boistel

J Insect Physiol 14(11):1661-1667 REF

Nov 1968 421 J825

Cells, Insect histology, Insect morphology, Insect physiology, Joints, Legs, Locomotion, Schistocerca gregaria. English summary

21673-68

# WARNING SOUNDS OF MOTHS.

D Covalt-Dunning

Z Tierpsychol 25(2):129-138 REF

Mar 1968 410 Z35

Bats, Insect behavior, Moths, Stridulation. German summary

21674-68

# FOUR IMPORTANT BEE DISEASES.

N A Cutts

Agr Gaz New S Wales 78(Pt 12):698-702

Dec 1967 23 N472

Apiculture, Apis mellifera, Bee diseases, Foul brood, Nosema disease, Paralysis, Sacbrood, Sanitation control (insects).

Economic importance, causal organisms, symptoms and control methods for four bee diseases in Australia are discussed.

21675-68

# THE EFFECTS OF HIGH TEMPERATURES ON GREENBUG, SCHIZAPHISGRAMINUM, REPRODUCTION.

N E Daniels

Kans Entomol Soc J 40(2):133-137

Apr 1967 420 K13

Aging, Laboratories, Reproduction, Research, Schizaphis graminum, Temperature.

21676-68

# CONTRIBUTION TO THE FAUNA OF THE CONGO (BRAZZAVILLE). MISSION A. VILLIERS AND A. DESCARPENTRIES. XLV. COLEOPTERA OCHODAEIDAE. (FR)

J Decelle

Inst Fondamental Afr Noire Bull Ser A Sci Natur

29(1):344

Jan 1967 515 D14

Coleoptera, Insect taxonomy, Zoogeography.

21677-68

# SOURCES OF LARVAL SALIVARY GLAND SECRETION IN THE DIPTERAN CHIRONOMUS TENTANS.

D Doyle H Laufer

J Cell Biol 40(1):61-78 REF

Jan 1969 442.8 J828

Chironomidae, Chironomus tentans, Larvae, Proteins, Salivary glands (insects), Secretion.

21678-68

# THE ROLE OF SOIL ARTHROPODS IN COMMUNITY ENERGETICS.

M D Engelmann

Amer Zool 8(1):61-69 REF

Feb 1968 410 AM3

Arthropoda, Insect ecology, Soil insects, Surveys.

21679-68

# SEXUAL REPRODUCTION OF 'GREEN PEACH APHID' MYZUS PERSICAE (SULZ) IN MENDOZA (ARGENTINA). (SP)

J C Espul P S Mansur

Rev Invest Agr Ser 5, Patol Veg 5(6):63-71

1968 464.8 R322

Insect physiology, Myzus persicae, Reproduction, Sex. English abstract

21680-68

# RESPONSE CHARACTERISTICS AND PROBABLE BEHAVIOURAL ROLES FOR ABDOMINAL VIBRATION RECEPTORS OF SOME COCKROACHES.

G J Florentine

J Insect Physiol 14(11):1577-1588 REF

Nov 1968 421 J825

Abdomen, Insect behavior, Insect physiology, Insect respiration, Leucophaea maderae, Nauphoct cinerea, Periplaneta americana, Research, Vibration.

21681-68

# RESEARCH ON FOREST ECOSYSTEMS. SERIES B: THE MIXED CALCIFIED OAK-GROVE OF VIRELLES-BLAIMONT. CONTRIBUTION NO. 19 INSECT COLLECTIONS IN TUBES OF WATER. (FR)

C Gaspar S Krzelj C Verstraeten F Wolf

Gembloux Inst Agron Etat Bull 3(2):294-300

1968 105.1 G285

Diptera, Forests, Hymenoptera, Insect collecting equipment, Insect ecology, Quercus. French abstract

21682-68

# A WAXED-PAPER LABORATORY CAGE FOR STERILIZATION STUDIES WITH THE ORIENTAL FRUIT MOTH, GRAPHOLITHA MOLESTA (BUSCK) (LEPIDOPTERA: TORTRICIDAE).

J A George M G Howard

Entomol Soc Ontario Proc 95:146-147

1964 420 ON8

Fertility, Gamma rays, Grapholitha molesta, Insect cages, Laboratories, Morphology, Research, Sterilization.

21683-68

# QUANTITATIVE RELATIONSHIPS BETWEEN FLEAS AND RODENTS IN A HAWAIIAN CANE FIELD.

G E Haas

Pacific Sci 23(1):70-82 REF



Jan 1969 475 P11

Host relationships, Quantitative analysis, Rodents, Siphonaptera, Sugarcane.

#### 21684-68

#### A BIOCHEMICAL LOOK AT INSECT DIAPAUSE.

D K Hayes

*Entomol Soc Amer Bull* 14(2):108-111 REF

Jun 1968 423.9 EN8

Biochemistry, Biological control (insects), Cells, Insect eggs, Insect morphology, Insecticides, Metabolism, Reproduction, Temperature, Viscera.

#### 21685-68

#### THE BIONOMICS AND ECOLOGY OF ANTHOCORIS CONFUSUS REUTER IN SCOTLAND.

A R Hill

*Soc Brit Entomol Trans* 18(Pt. 3):35-48

Dec 1968 420 SO15

Anthocoridae, Demography, Insect ecology.

#### 21686-68

#### EPIZOOTIOLOGICAL RESEARCH ON MILKY DISEASE CAUSED BY BACILLUS POPILLIAE (MELOLONTHA). (FR)

B Hurpin

*Ann Epiphyt* 18(2):127-173 REF

1967 464.9 F84AN

Bacillus popilliae, Bacteria, Insect diseases, Milky disease, Research. English summary

#### 21687-68

#### THE FINE STRUCTURE OF THE GASTRIC CAECA OF Aedes Aegypti LARVAE.

J C Jones V H Zeve

*J Insect Physiol* 14(11):1567-1575 REF

Nov 1968 421 J825

Absorption, Aedes aegypti, Gastrointestinal system, Insect physiology, Microscopy, Mitochondria, Muscles.

#### 21688-68

#### A LIST OF SINHALESE APHIDS (HEM., APHIDIDAE).

E Judenko V F Eastop

*Entomol Mon Mag (SER 4)* 99(277-9, JAN-MAR):62-63

1963 421 EN86

Aphididae, Insect names, Insect taxonomy, Myzus persicae, Traps.

#### 21689-68

#### ICHNEUMONOLOGICAL (HYM.) REPORTS FROM FINLAND I.

R Jussila

*Suomen Hyonteistieteellinen Aikakauskir Ann*

*Entomol Fenn* 33(2):107-112 REF

30 Aug 1967 421 SU7

Ichneumonidae, Insect taxonomy.

Three species of Ichneumonid wasps new to Finland are taxonomically described.

#### 21690-68

#### SYNANTHEDON FLAVIVENTRIS STGR. (LEP., AEGERIIDAE) FOUND IN SUOMESTA. (FI)

J Kaisila

*Suomen Hyonteistieteellinen Aikakauskir Ann*

*Entomol Fenn* 33(2):125-129 MAP REF

30 Aug 1967 421 SU7

Insect ecology, Synanthedon, Zoogeography. German abstract

#### 21691-68

#### STUDIES ON THE OLFACTORY STIMULI GUIDING THE BARK BEETLE BLASTOPHAGUS PINIPERDA L. (COLEOPTERA, SCOLYTIDAE) TO ITS HOST TREE.

E Kangas V Perttunen H Oksanen

*Suomen Hyonteistieteellinen Aikakauskir Ann*

*Entomol Fenn* 33(3):181-211 REF

02 Nov 1967 421 SU7

Chemoreceptors, Insect biology, Pinus sylvestris, Plant biochemistry, Scolytidae.

#### 21692-68

#### DEVELOPMENTAL CHANGES IN THE LATE LARVA OF CALLIPHORA STYGIA. I. OLYMPH.

J F Kinnear M D Martin J A Thompson G J

Neufeld

*Australian J Biol Sci* 21(5):1033-1045 REF

Oct 1968 442.8 AU72

Biochemistry, Blood proteins, Calliphora stygia, Calliphoridae, Larvae, Metamorphosis.

#### 21693-68

#### EFFECTS OF PARENTAL AGE ON THE LIFE CYCLE OF THE SOUTHERN GREEN STINK BUG, NEZARA VIRIDULA L. (HETEROPTERA: PENTATOMIDAE).

K Kiritani K Kimura

*Appl Entomol Zool* 2(2):69-78 REF

Jun 1967 SB599.A6

Aging, Insect eggs, Insect morphology, Insect physiology, Metamorphosis, Nezara viridula, Research.

#### 21694-68

#### THE PRESENT DISTRIBUTION OF HYLOTRUPES BAJULUS L. (COL., CERAMBYCIDAE) IN NORWAY AND ITS ABUNDANCE IN SOME DISTRICTS.

P Knudsen A Bakke

*Norsk Entomol Tidsskr* 14(2):94-102 MAP REF

1967 421 N812

Cerambycidae, Demography, Insect ecology, Zoogeography.

#### 21695-68

#### ACTION OF INSECT HORMONES ON THE FATE OF C-GLUCOSE IN THE DIAPAUSING, BRAINLESS PUPA OF SAMIA CYNTHIA PRYER (LEPIDOPTERA: SATURNIIDAE).

M Kobayashi S Kimura M Yamazaki

*Appl Entomol Zool* 2(2):79-84 REF

Jun 1967 SB599.A6

Brain, Glucose compounds, Hormones, Insect morphology, Insect physiology, Metabolism, Samia cynthia pryeri, Tables (data).

#### 21696-68

#### A PROBLEM IN THE DIAGNOSIS OF HEAD LICE.

F W Kutz

*Entomol News (philadelphia)* 80(1):27-28

Jan 1969 421 EN88

Diagnosis, Insect identification, Pediculus humanus capitis, Public health.

#### 21697-68

#### BIOLOGY OF THE BLACK WIDOW SPIDER, LATRODECTUS HASSELTII THORELL (ARANEIDA: THERIDIIDAE).

B L Lariaso

*Philippine Agr* 51(2):171-180 REF

Jul 1967 25 P542

Insect rearing, Latrodectus, Life cycle, Oviposition, Sex behavior.

#### 21698-68

#### THE NEUROSECRETORY CELLS OF THE BRAIN OF Aedes Aegypti IN RELATION TO LARVAL MOLT, METAMORPHOSIS AND OVARIAN DEVELOPMENT.

J R Larsen A Broadbent

*Amer Microscop Soc Trans* 87(4):395-410 REF

Oct 1968 440.9 AM33

Aedes aegypti, Histochemistry, Insect physiology, Metamorphosis, Nervous system, Ovaries.

#### 21699-68

#### DEVELOPMENTAL INTERACTIONS IN THE DIPTERAN SALIVARY GLAND.

H Laufer

*Amer Zool* 8(2):257-271 REF

May 1968 410 AM3

Biochemistry, Chironomidae, Chromosomes, Insect histology, Insect physiology, Salivary glands (insects).

#### 21700-68

#### CRICKET NUTRITION: SUPPLEMENTATION OF GRASS BY KNOWN NUTRIENTS.

T D Luckey P C Stone

*J Insect Physiol* 14(11):1533-1538 REF

Nov 1968 421 J825

Acheta domesticus, Blattella germanica, Diet, Experimental insects, Food additives, Grasses, Insect nutrition, Insect physiology.

#### 21701-68

#### DISTRIBUTION AND ADAPTIVE DIVERSITY OF TRAPDOOR SPIDERS.

B Y Main

*Australian Natur Hist* 16(2):49-53

Jun 1968 475 AU7

Aging, Ctenizidae, Habitats, Insect behavior, Insect dissemination, Predaceous insects.

#### 21702-68

#### THE RATE OF PASSAGE OF FOOD AND THE EFFECT OF TEMPERATURE IN TWO NOCTUID CATERPILLARS.

L M L Mathur

*Ann Zool* 5(6):57-64

23 May 1967 410 AN78

Digestion, Food habits, Insect physiology, Noctuidae, Temperature.

#### 21703-68

#### TERRITORIAL BEHAVIOR OF BARK-BEETLE MALES.

J H McGhehey

*Can Entomol* 100(11):1153

Nov 1968 421 C16

Insect behavior, Scolytidae.

#### 21704-68

#### ARE HYLEMYA CILICRURA AND HYLEMYA LITURATA TWO SEPARATE SPECIES.

D G R McLeod

*Entomol Soc Ontario Proc* 95:140-142

1964 420 ON8

Culture media, Diet, Hylemya cilicrura, Hylemya liturata, Insect cages, Laboratories, Research.

#### 21705-68

#### ON MY ACQUAINTANCE WITH MIDDLE AND NORTHERN EUROPEAN SPECIES OF THE GENUS PSENULUS KOHL (HYM., SPHECOIDEA). (GE)

A K Merisuo

*Suomen Hyonteistieteellinen Aikakauskir Ann*

*Entomol Fenn* 33(3):151-154

02 Nov 1967 421 SU7

Hymenoptera, Insect taxonomy, Zoogeography.

#### 21706-68

#### STUDIES ON BIOLOGY OF BANMALIKA LEAF MINOR (AGROPSISTIS LIMATUS, MOTH, COLEOPTERA, HALTICIDAE). A SERIOUS PEST OF BANMALIKE (JASMINUM AQUESTIFOLIUM, VOHL.) IN RAJASTHAN.

V P Mital

*Agra Univ J Res Sci* 16(Pt 1):89-91

Jan 1967 513 AG8

Chrysomelidae, Insect biology, Leaf miners, Plant diseases.

#### 21707-68

#### STABILITY OF CHILO IRIDESCENT VIRUS. (JA)

J Mitsuhashi K Koyama

*Jap J Appl Entomol Zool* 11(4):177-181

Dec 1967 475 J27

Chemicals, Chilo, Iridescent virus, Research, Storage, Temperature. English summary

#### 21708-68

#### THE EFFECT OF AGE, SKF 525- A HYDROCHLORIDE, AND CHLORCYCLIZINE DIHYDROCHLORIDE ON THE TOXICITY OF PARATHION TO ADULT ALKALI BEES, NOMIA MELANDERI CKLL.

M J Moradeshaghi

*Diss Abstr Sect B* 29(5):1722B

Nov 1968 Z5055.U49D53

21709- 68

Aging, Bees, Chlorides, Hydrogen, Nomia melan-  
deri, Parathion, Toxicology.

21709-68

HOW FLIES FLY. (GE)

W Nachtigall

*Kosmos* 64(10):434-437

Oct 1968 474 K842

Coleoptera, Diptera, Grasshoppers, Insect anat-  
omy, Insect behavior, Insect dissemination, Insect  
flight, Mechanization, Muscles, Nervous system.

21710-68

A CYTOLOGICAL STUDY OF CHANGES IN  
THE FAT BODY OF TROGODERMA  
GRANARIUM DURING METAMORPHOSIS,  
WITH SPECIAL REFERENCE TO THE  
PROTEINACEOUS GLOBULES.

K S S Nair G K Karnavar

*J Insect Physiol* 14(11):1651-1659 REF

Nov 1968 421 J825

Cytology, Fat body, Insect morphology, Insect  
physiology, Metamorphosis, Proteins, Research,  
Trogoderma granarium.

21711-68

STUDIES ON THE FEEDING BEHAVIOR OF  
GREEN RICE LEAFHOPPER, NEPHOTETTIX  
CINCTICEPS UHLER. II. PROBING FREQUEN-  
CY OF THE ADULT LEAFHOPPER. (JA)

A Naito J Masaki

*Jap J Appl Entomol Zool* 11(4):150

Dec 1967 475 J27

Environment, Feeding, Insect behavior, Laborato-  
ries, Nephotettix cincticeps, Research. English  
summary

21712-68

ON THE REINFORM NEMATODE  
ROTYLENCHULUS NICOTIANA (YOKOO ET  
TANAKA, 1954) N. COMB. IN JAPAN  
(TYLENCHIDA: HOPLOLAIMIDAE). (JA)

K Nakasono M Ichinohe

*Jap J Appl Entomol Zool* 11(4):169-176 REF

Dec 1967 475 J27

Anatomy, Crops, Insect identification, Insect  
names, Research, Rotylenchulus nicotiana. English  
summary

21713-68

ACID PHOSPHATASE ACTIVITY IN THE  
DIGESTIVE SYSTEM OF THE DESERT  
LOCUST SCHISTOCERCA GREGARIA (FOR-  
SKAL).

S N H Naqui S H Ashrafi M A H Qadri

*Australian J Biol Sci* 21(5):1047-1052 REF

Oct 1968 442.8 AU72

Acid phosphatase, Biochemistry, Gastrointestinal  
system, Insect physiology, Schistocerca gregaria.

21714-68

ECOLOGICAL STUDIES OF CERTAIN NATU-  
RAL MORTALITY FACTORS OF THE SUGAR-  
CANE BORER, DIATRAEA SACCHARALIS  
(FABRICIUS) IN LOUISIANA.

A A G Negm

*Diss Abstr Sect B* 29(5):1722B

Nov 1968 Z5055.U49D53

Diatraea saccharalis, Ecology, Insect physiology,  
Mortality, Research, Sugarcane.

21715-68

FIELD OBSERVATIONS ON THE ROOSTING  
BEHAVIOR OF THE AFRICAN MIGRATORY  
LOCUST (LOCUSTA MIGRATORIA MIGRA-  
TORIOIDES R. AND F.) IN THE SOLITARY  
PHASE.

B Nickerson

*Entomol Mon Mag (SER 4)* 99(277-9, JAN-  
MAR):51-53

1963 421 EN86

Habitats, Insect behavior, Locusta migratoria  
migratorioides, Research.

21716-68

ON THE HABITATS OF SOME LONCHAEAE  
SPECIES IN FENNOSCANDIA (DIPT.,  
LONCHAEIDAE).

M Nuorteva

*Suomen Hyonteistieteellinen Aikakauskir Ann**Entomol Fenn* 33(2):118-121

30 Aug 1967 421 SU7

Diptera, Habitats, Insect ecology, Insect rearing.

21717-68

STUDIES ON THE POSSIBILITIES OF USING  
BLOWFLIES (DIPT.) AS MEDICOLEGAL IN-  
DICATORS IN FINLAND. I. REPORT OF FOUR  
INDOOR CASES FROM THE CITY OF HELSIN-  
KI.

P Nuorteva M Isokoski K Laiho

*Suomen Hyonteistieteellinen Aikakauskir Ann**Entomol Fenn* 33(4):217-225 REF

20 Dec 1967 421 SU7

Autopsies, Calliphoridae, Death, Insect physiology,  
Medical entomology.

21718-68

CHANGES IN THE RESPIRATORY METABOL-  
ISM OF RHODNIUS PROLIXUS AS INDUCED  
BY TEMPERATURE.

A Y K Okasha

*J Insect Physiol* 14(11):1621-1634 REF

Nov 1968 421 J825

Feeding, Insect metabolism, Insect physiology, In-  
sect respiration, Larvae, Rhodnius prolixus, Tem-  
perature.

21719-68

THE APPEARANCE AND DISTRIBUTION OF  
EPICUTICULAR INFRAMICROSCOPIC FOR-  
MATIONS OF THREE COLLEMBOLS. (FR)

C Palevody

*Acad Sci Compt Rend Ser D Sci Nat (SER**D)* 267(2, 2ND SEMESTER):214-217

08 Jul 1968 505 P21

Biochemistry, Collembola, Cuticle, Insect histolo-  
gy.

21720-68

ANTS.

G Pasfield

*Agr Gaz New S Wales* 78(PT 2):105-109

Feb 1967 23 N472

Catalogs, Chemical control (insects), Formicidae.

Nuisance species of ants in Australia and their con-  
trols are discussed.

21721-68

THE ORGANIZATION OF THE SAR-  
COPLASMIC RETICULUM AND T SYSTEM IN  
THE FEMORAL MUSCLE OF THE HOUSEFLY,  
MUSCA DOMESTICA.

I Pasquali-Ronchetti

*J Cell Biol* 40(1):269-273 REF

Jan 1969 442.8 J828

Electron microscopy, Insect histology, Musca  
domestica, Muscles.

21722-68

THE ARTHROPOD FAUNA ASSOCIATED  
WITH THE BIRCH BRACKET FUNGUS  
POLYPORUS BETULINUS, IN EASTERN  
CANADA.

D P Pielou A N Verma

*Can Entomol* 100(11):1179-1199

Nov 1968 421 C16

Arthropoda, Betula, Fungus diseases (plants), In-  
sect behavior, Polyporus betulinus.

21723-68

BIOLOGY OF APIS DORSATA F.

H A Qayyum N Ahmad

*Pakistan J Sci* 19(3):109-113

May 1967 475 P172

Apis dorsata, Insect biology, Queen bees. English  
abstract

21724-68

CUTICULAR ESTERASE IN THE STERNAL  
GLAND OF CALOTERMES FLAVICOLLIS F.  
(ISOPTERA, TERMITIDAE). (FR)

A Quennedey C Noirot

*Acad Sci Compt Rend Ser D Sci Nat (SER**D)* 266(26, 2ST SEMESTER):2456-2458

24 Jun 1968 505 P21

Enzymes, Esterases, Glands (insects), Insect  
histology, Termites.

21725-68

ON THE EXISTENCE OF CELLS WITH  
VACUOLES IN THE BRAIN OF MUSCA  
DOMESTICA L. (FR)

F Ramade

*Acad Sci Compt Rend Ser D Sci Nat (SER**D)* 266(26, 2ST SEMESTER):2437-2440

24 Jun 1968 505 P21

Brain, Cytology, Insect histology, Musca  
domestica.

21726-68

CROSS-BRIDGES AND PERIODS IN INSECT  
FLIGHT MUSCLE.

M K Reedy

*Amer Zool* 7(3):465-481 REF

Aug 1967 410 AM3

Belostomatidae, Electron microscopy, Insect  
physiology, Muscles, Myosins. PHS 2F2-NB-  
21075-02 and 03

21727-68

BUPRESTIS AURULENTA L. (COL.,  
BUPRESTIDAE) IN IRELAND.

G Roche

*Entomol Mon Mag (SER 4)* 99(277-9, JAN-  
MAR):42

1963 421 EN86

Buprestis aurulenta, Insect identification,  
Research, Timber.

21728-68

REARING OF CATERPILLARS OF THE EU-  
DEMIS MOTH (LOBESIA BOTRANA SCHIFF.)  
ON SOME SUBSTITUTED NATURAL FOODS.  
(FR)

R Roehrich

*Rev Zool Agr Appl* 66(7-9, 3RD

TRIMESTER):111-115

1967 410.9 SO12

Color, Feeding, Grapes, Insect rearing, Olethreu-  
tidae, Polychrosis botrana.

21729-68

SEX PHEROMONE SPECIFICITY TESTS IN  
THE TORTRICIDAE--AN INTRODUCTORY RE-  
PORT.

W L Roclofs K C Feng

*Entomol Soc Amer Ann* 61(2):312-316 REF

15 Mar 1968 420 EN82

Epithelium, Glands (insects), Hormones, Insect  
histology, Lepidoptera, Pheromones, Tortricidae.

21730-68

CONTRIBUTION TO THE DEVELOPMENT OF  
THE ANTERIOR HEAD AND THE MOUTH RE-  
GION OF PERIPLANETA AMERICANA. (GE)

I Rohrschneider

*Zool Jahrbucher Abt Allg Zool Physiol Tiere*

85(4):537-578 REF

1968 410 Z751Z

Head, Insect histology, Insect morphology, Mouth  
parts, Periplaneta americana. English abstract

21731-68

TERRITORIALITY IN THE SHEET-WEB  
SPIDER LINYPHIA TRIANGULARIS (CLERCK)  
(ARANEAE, LINYPHIIDAE).

R S Rovner

*Z Tierpsychol* 25(2):232-242 REF

Mar 1968 410 Z35

Insect behavior, Insect ecology, Linyphia triangu-  
laris, Research, Social insects, Spiders. German  
summary

21732-68

ATP-DRIVEN OSCILLATION OF GLYCEROL-  
EXTRACTED INSECT FIBRILLAR MUSCLE:  
MECHANOCHEMICAL COUPLING.

J C Ruegg

*Amer Zool* 7(3):457-464 REF

Aug 1967 410 AM3

Adenosine triphosphates, Belostomatidae,  
Biochemistry, Insect flight, Insect physiology,  
Muscles.



- 21733-68**  
**ULTRASTRUCTURE OF MOTH ALARY MUSCLES AND THEIR ATTACHMENT TO THE HEART WALL.**  
 J W Sanger F V McCann  
*J Insect Physiol* 14(11):1539-1544 REF  
 Nov 1968 421 J825  
 Cells, Dorsal vessel, Hyalophora cecropia, Insect anatomy, Insect physiology, Muscles.
- 21734-68**  
**RESEARCH ON BIOLOGICAL PEST CONTROL. (GE)**  
 F Scherney E Naton H D Mueller  
*Gesunde Pflanzen* 20(10):219-223 REF  
 Oct 1968 464.8 G33  
 Attractants, Biological control (pests), Insects, Integrated control (insects), Parasitism, Research, Sterilization.
- 21735-68**  
**MAIN CURRENTS IN RESEARCH CONCERNING STERILIZATION METHODS OF INSECTS. (GE)**  
 E M Schumakon  
*Pflanzenschutzberichte* 38(12):157-165 REF  
 Oct 1968 464.9 P48  
 Biological control (insects), Breeding, Chemosterilants, Insect genetics, Insect rearing, Population, Research, Sterilization. Report given to 6th Int. Congress for Plant Protection, Vienna 1967. english summary
- 21736-68**  
**BETTER BEEKEEPING: THE SUMMER ROUTINE.**  
 S Singh  
*Indian Farming* 16(3):28-29  
 Jun 1966 22 IN283  
 Apiculture, Bee behavior.
- 21737-68**  
**BETTER BEE-KEEPING: II. MONSOON MEASURES AND AUTUMN NEEDS.**  
 S Singh  
*Indian Farming* 16(5):22  
 Aug 1966 22 IN283  
 Apiculture, Climate.
- 21738-68**  
**COMPETITION BETWEEN INSECT SPECIES. (TU)**  
 M N Sisli  
*Bitki Koruma Bulteni* 6(3):111-118 REF  
 1966 464.8 B542  
 Competition, Entomology, Insects, Research.
- 21739-68**  
**RING GLAND TRANSPLANTATIONS AND BODY WEIGHT IN DROSOPHILA.**  
 K C Sondhi  
*J Insect Physiol* 14(11):1553-1557 REF  
 Nov 1968 421 J825  
 Drosophila melanogaster, Experimental insects, Glands (insects), Hormones, Injections, Insect physiology, Temperature, Transplanting.
- 21740-68**  
**DESCRIPTION OF THE ADULT TETRANYCHUS TELARIUS L. (ACARINA, TETRANYCHIDAE).**  
 B K Srivastava L M L Mathur  
*Entomol Mon Mag (SER 4)* 99(277-9 JAN-MAR):4-6  
 1963 421 EN86  
 Crop yields, Cuticle, Geography, Insect identification, Morphology, Research, Tetranychus telarius.
- 21741-68**  
**ON THE ALKALINE AND ACID PHOSPHATASE IN THE ALIMENTARY TRACT OF PERIPLANETA AMERICANA L. (BLATTARIA: BLATTIDAE).**  
 J P Srivastava S C Saxena  
*Appl Entomol Zool* 2(2):85-92 REF  
 Jun 1967 SB599.A6  
 Acid phosphatase, Alkaline phosphatase, Biochemistry, Digestion, Gastrointestinal system, Hydrogen-ion concentration, Insect physiology, Periplaneta americana, Research, Salivary glands (insects).
- 21742-68**  
**BIOLOGY OF THE GALL-FORMER PROCECIDOCHARES STONEI ON A COMPOSITE.**  
 M J Tauber C A Tauber  
*Entomol Soc Amer Ann* 61(2):553-554 REF  
 15 Mar 1968 420 EN82  
 Chrysothamnus viscidiflorus, Gall-making insects, Insect biology, Procecidochares stonei.
- 21743-68**  
**PHARMACOLOGY PROPERTIES OF THE TOXINS IN THE VENOM OF THE SCORPION (ANDROCTONUS AUSTRALIS). (FR)**  
 F Tazieff-Depierre  
*Acad Sci Compt Rend Ser D Sci Nat (SER D)* 267(2, 2ND SEMESTER):240-243  
 08 Jul 1968 505 P21  
 Biochemistry, Pharmacology, Scorpionida, Toxins, Venoms.
- 21744-68**  
**NEW SPECIES OF THE SUB-FAMILY BOMBINAE OF THE PALAEARCTIC REGION (HYMENOPTERA, APOIDEA). (GE)**  
 B Tkalcu  
*Acta Ent Bohemoslov* 1(65):21-51 REF  
 1968 420 C33  
 Bombinae, Entomology, Insect identification, Insect taxonomy.
- 21745-68**  
**CHANGES IN THE ACID-SOLUBLE NUCLEOTIDES DURING THE PUPAL DEVELOPMENT OF THE RICE STEM BORER, CHILO SUPPRESSALIS WALKER (LEPIDOPTERA: PYRALIDAE).**  
 S Tojo C Hirano  
*Appl Entomol Zool* 2(2):93-99 REF  
 Jun 1967 SB599.A6  
 Acids, Biochemistry, Chilo suppressalis, Chromatography, Insect morphology, Metamorphosis, Nucleotides, Pupae.
- 21746-68**  
**RANGE OF HOST PLANTS AND LARVAL FEEDING IN PHYTOMYZA ATRICORNIS MEIGEN (DIPT., AGROMYZIDAE).**  
 K N Trehan V K Sehgal  
*Entomol Mon Mag (SER 4)* 99(277-9 JAN-MAR):1-3  
 1963 421 EN86  
 Feeding, Food plants, Larvae, Morphology, Phytomyza atricornis, Research.
- 21747-68**  
**NUCLEAR AND SPINDLE DAMAGE DURING EMBRYONIC SEGMENTATION, PROCESSES, YOLK ABSORPTION, SEROSA AND BLASTODERM NUCLEUS IN TOTAL X-RAY IRRADIATED EGGS OF KALOTERMES FLAVICOLLIS FABR. (ISOPTERA). (FR)**  
 W Truckenbrodt  
*Zool Jahrbucher Abt Allg Zool Physiol Tiere* 85(4):609-640 REF  
 1967 410 Z751Z  
 Eggs, Embryology, Insect biochemistry, Insect morphology, Irradiation, Isoptera.
- 21748-68**  
**INSECT NEUROMUSCULAR MECHANISMS.**  
 P N R Usherwood  
*Amer Zool* 7(3):553-582 REF  
 Aug 1967 410 AM3  
 Bibliography, Biochemistry, Insect physiology, Muscles, Neurology.
- 21749-68**  
**RESULTS OF THE TRANSPLANTATION OF THE OVARIES OF IMAGOS TO LOCUSTA MIGRATORIA (L.). (FR)**  
 A Vogel  
*Acad Sci Compt Rend Ser D Sci Nat (SER D)* 267(12, 2ND SEMESTER):1043-1046  
 16 Sep 1968 505 P21  
 Insect histology, Insect morphology, Insect physiology, Locusta migratoria, Ovaries.
- 21750-68**  
**THE FALL WEBWORM, HYPHANTRIA CUNEA, ITS DISTRIBUTION AND NATURAL ENEMIES: A WORLD LIST (LEPIDOPTERA: ARCTIIDAE).**  
 L O Warren M Tadic  
*Kans Entomol Soc J* 40(2):194-202 REF  
 Apr 1967 420 K13  
 Geography, Habitats, Hyphantria cunea, Insect behavior, Insect migration, Predaceous insects, Research.
- 21751-68**  
**LABORATORY STUDIES ON INTERSPECIES TRAIL FOLLOWING AND TRAIL PREFERENCE OF ARMY ANTS (DORYLINAE).**  
 J F Watkins T W Cole R S Baldrige  
*Kans Entomol Soc J* 40(2):146-151  
 Apr 1967 420 K13  
 Formicidae, Insect behavior, Insect identification, Laboratories, Research, Neivamyrmex nigrescens, N. opacithorax, N. pilosus, N. pauxillus, N. wheeleri, and Labidus coecus- insect listed.
- 21752-68**  
**AUSTRALIAN DRAGONFLIES.**  
 J A L Watson  
*Australian Natur Hist* 16(2):33-38  
 Jun 1968 475 AU7  
 Insect behavior, Insect identification, Insect migration, Odonata, Predaceous insects, Research.
- 21753-68**  
**TRANSDETERMINATION IN THE LAYOUT OF THE ORGANS OF THE DROSOPHILA FLY. (GE)**  
 R Wehner  
*Umschau* 68(11):325  
 23 May 1968 474 UM7  
 Drosophila, Insect physiology, Larvae, Metamorphosis, Viscera.
- 21754-68**  
**A CONTRIBUTION TO THE ALIMENTARY CANAL, SALIVARY GLANDS AND MALPIGHIAN TUBULES OF SACCHARICOCCUS SACCHI COCKERELL (HOMOPTERA PSEUDOCOCCIDAE).**  
 R L Yadava B S Chandel  
*Zool Jahrbucher Abt Allg Zool Physiol Tiere* 85(4):597-608 REF  
 1967 410 Z751Z  
 Gastrointestinal system, Insect histology, Insect morphology, Malpighian tubes, Pseudococcidae, Saccharicoccus sacchari, Salivary glands (insects).
- 21755-68**  
**INVESTIGATION OF STERILIZING DOSES FOR EPHESTIA KUNNIELLA L. IN IRRADIATION IN VARIOUS STAGES OF DEVELOPMENT.**  
 N I Yusifov  
*Radiobiology* 8(2):158-164 REF  
 Nov 1968 442.8 R11AE  
 Chemical control (insects), Ephestia, Insect reproduction, Irradiation, Phycitidae, Sterilization. Russian journal- vol.8(2):275-278, 1968

## GENETICS

- 21756-68**  
**MATING CHOICE IN CROSSES BETWEEN GEOGRAPHIC POPULATIONS OF DROSOPHILA PSEUDO OBSCURA.**  
 W W Anderson L Ehrman  
*Amer Midland Natur* 81(1):47-53 MAP REF  
 Jan 1969 410 M58  
 Demography, Drosophila pseudoobscura, Insect evolution, Insect genetics, Zoogeography.

21757-68

21757-68  
GENOTYPE FREQUENCY AND MATING SUCCESS IN THE WILLISTON: SPECIES GROUP OF DROSOPHILA.

L Ehrman C Pctit  
*Evolution* 22(4):649-658 REF  
30 Dec 1968 443.8 EV62  
Demography, Drosophila, Insect genetics.

21758-68

THE FREQUENCY OF INTERBREEDING BETWEEN TWO SIBLING SPECIES OF DACUS (DIPTERA) IN WILD POPULATIONS.

G W Gibbs  
*Evolution* 22(4):667-683  
30 Dec 1968 443.8 EV62  
Dacus, Demography, Insect genetics.

21759-68

THE TEMPERATURE-SENSITIVE PERIOD IN THE DEVELOPMENT OF ROLLED HEMIZYGOTES OF DROSOPHILA MELANOGASTER.

R Hackman S Lakovaara  
*Suomalainen Tiedeakatemia Ann Ser A Iv Biol* 4(118):3-13 REF  
1967 442.9 H36  
Drosophila melanogaster, Insect genetics, Insect physiology, Temperature.

21760-68

GENETIC VARIABILITY IN ISCHNURAN DAMSELFLIES.

C Johnson  
*Amer Midland Natur* 81(1):39-46  
Jan 1969 410 M58  
Insect evolution, Insect genetics, Odonata, Venation (insects), Wings (insects).

21761-68

AN EXPERIMENTAL AND GENETIC ANALYSIS OF DISPERSAL BEHAVIOR IN TRIBOLIUM.

J C Ogden  
*Diss Abstr Sect B* 29(5):1723B  
Nov 1968 Z5055.U49D53  
Genetics, Insect behavior, Research, Tribolium.

21762-68

EVOLUTION AND HYBRIDIZATION IN THE UTETHEISA ORNATRIX COMPLEX (LEPIDOPTERA: ARCTIIDAE). I. INTER- AND INTRAPOPULATION VARIATION AND ITS RELATION TO HYBRIDIZATION.

R W Pease  
*Evolution* 22(4):719-735 REF  
30 Dec 1968 443.8 EV62  
Arctiidae, Breeding, Demography, Insect evolution, Zoogeography.

21763-68

MIMETIC VERSUS DISRUPTIVE COLORATION IN INTERGRADING POPULATIONS OF LIMENITIS ARTHEMIS AND ASTYANAX BUTTERFLIES.

A P Platt L P Brower  
*Evolution* 22(4):699-718 MAP REF  
30 Dec 1968 443.8 EV62  
Color, Demography, Insect genetics, Nymphalidae, Zoogeography.

21764-68

ADAPTIVE SIGNIFICANCE OF MYCOPHAGY IN STORED-PRODUCT ARTHROPODA.

R N Sinha  
*Evolution* 22(4):785-798 REF  
30 Dec 1968 443.8 EV62  
Fungi, Insect adaptation, Insect evolution, Mites, Predaceous insects, Stored products.

21765-68

GENETICAL CONTROL OF PENETRANCE AND EVOLUTION OF DOMINANCE IN DROSOPHILA.

M J Whitten  
*Heredity* 23(Pt 2):263-278 REF  
May 1968 443.8 H42

Drosophila melanogaster, Insect evolution, Insect genetics.

## CROP PROTECTION

21766-68

USE OF FORMALINIZED MYCOPLASMA GALLISEPTICUM ANTIGENS AND CHICKEN ERYTHROCYTES IN HEMAGGLUTINATION AND HEMAGGLUTINATION-INHIBITION STUDIES.

H E Adler A J Da Massa  
*Appl Microbiol* 15(2):245-248  
Mar 1967 448.3 AP5  
Antigens, Chickens, Erythrocytes, Formaldehyde, Hemagglutination, Mycoplasma gallisepticum, Physiology, Research.

21767-68

NEW KNOWLEDGE CONCERNING WIRE STRINGING IN FRUIT GROWING. (GE)

F Afscharpour  
*Gesunde Pflanzen* 20(5):113-115  
May 1968 464.8 G33  
Amines, Frost, Fruit, Plant injuries, Plant physiology, Plant protection, Spraying.

21768-68

LETTUCE GROWTH AND TIPBURN INCIDENCE UNDER CONTROLLED HUMIDITY. (ABSTRACT).

G E Bottenberg T W Tibbitts  
*Hortscience* 3(2,SUMMER):124  
1968 SB1.H6  
Humidity, Lettuce, Light, Peat, Plant physiology, Research, Tipburn (lettuce).

21769-68

EFFECT OF FLUORESCENT LIGHTING BEYOND THE NORMAL DAY ON THE FLOWERING OF THE CARNATION.

N W Butterfield G A Hemerick A Kinoshita  
*Hortscience* 3(2,SUMMER):78  
1968 SB1.H6  
Dianthus caryophyllus, Equipment, Fluorescent lamps, Reproduction, Research, Temperature.

21770-68

CORN EARWORM DAMAGE TO EARS WITH STARCHY (SU.) VERSUS (SU.) KERNELS ON GENETICALLY UNIFORM MOTHER PLANTS. (ABSTRACT).

J W Cameron L D Anderson H H Shorey  
*Hortscience* 3(2,SUMMER):110  
1968 SB1.H6  
Harvesting, Heliothis zea, Plant injuries, Pollination, Research, Starches.

21771-68

THE LEACHING OF AUXIN FROM AIR LAYERS.

R J Cameron  
*New Zeal J Bot* 6(2):237-239  
Jun 1968 450 N48  
Aluminum foil, Carbon isotopes, Indoleacetic acid, Musci, Pinus radiata, Plant hormones, Soil leaching.

21772-68

SPONTANEOUS VARIABILITY OF SINGLE ISOLATES OF PHYTOPHTHORA INFESTANS. I. CULTURAL VARIATION.

C E Caten J L Jinks  
*Can J Bot* 46(4):329-348 REF  
Apr 1968 470 C16C  
Culture media, Phytophthora infestans, Plant genetics, Reproduction, Research.

21773-68

SURVEY OF EPIDEMIC DISEASES OF FOREST TREES IN TAIWAN IV.

C C Chen  
*Acad Sinica Bot Bull (N s)* 8:295-315  
Oct 1967 451 AC10B  
Research, Surveys, Tree diseases, Trees. Japanese summary

21774-68

COMPARISON OF STAMINATE FLOWER PRODUCTION ON GYNOCIOUS STRAINS OF CUCUMBERS BY PURE GIBBERELLINS (A3, A4, A7, AND A13) AND MIXTURES. (ABSTRACT).

R K Clark D S Kenney  
*Hortscience* 3(2,SUMMER):102  
1968 SB1.H6  
Cucumbers, Fermentation, Gibberella fujikuroi, Gibberellins, Plant anatomy, Research.

21775-68

FOLIAR ABSORPTION OF BORON BY BARTLETT PEARS. (ABSTRACT).

O C Crandall C C Woodbridge  
*Hortscience* 3(2,SUMMER):106  
1968 SB1.H6  
Boron, Foliar application, Harvesting, Pears, Research, Spraying, Water.

21776-68

IMPORTANT PLANT PROTECTION PROBLEMS IN BAVARIAN AGRICULTURE. (GE)

R Diercks  
*Gesunde Pflanzen* 20(10):200-202,204-206,  
Oct 1968 464.8 G33  
Beets, Fungicides, Grain, Herbicides, Millet, Pest control, Pesticides, Plant diseases, Plant protection, Potatoes, Research, Weed control.

21777-68

FINE STRUCTURAL CHARACTERIZATION OF PLANT MICROBODIES.

S E Frederick E H Newcomb E L Vigil W P Wergin  
*Planta* 81(3):229-252 REF  
1968 450 P693  
Cells, Electron microscopy, Plant anatomy, Plant morphology, Research, Tissues.

21778-68

SOME NOTES ON THE STUDY OF BARK FUNGI.

J H B Garner  
*Can J Bot* 45(4):540-541  
Apr 1967 470 C16C  
Bark, Biology, Fungi, Research.

21779-68

FOLIAR PENETRATION OF NAPHTHALENEACETIC ACID. (ABSTRACT).

D W Green M J Bukovac  
*Hortscience* 3(2,SUMMER):120  
1968 SB1.H6  
Absorption, Foliar application, Kidney beans, Leaves, Naphthaleneacetic acid, Pears, Radioactivity, Research.

21780-68

THE CHEMICAL MAKE-UP AND SELECTIVE EFFECT OF TRIAZINE HERBICIDES. (GE)

H Gysin  
*Pflanzenschutzberichte* 38(12):211-223  
Oct 1968 464.9 P48  
Biochemistry, Chemical control (pests), Chemistry, Fungicides, Herbicides, Setaria, Sorghum, Triazine. Given at 6th Int. Congress for Plant Protection, Vienna, 1967 english summary

21781-68

NEW ANTIBACTERIAL AGENT (U-24,544) ISOLATED FROM STREPTOMYCES GRISEUS.

R R Herr F Reusser  
*Appl Microbiol* 15(5):1142-1144  
Sep 1967 448.3 AP5  
Antibiotics, Bacteria. Chemistry, Chromatography, Culture media, Microbiology, Research, Streptomyces griseus.

21782-68

DORMANCY OF ONION SETS AS INFLUENCED BY IRRADIATION, GIBBERELLIN AND TEMPERATURE TREATMENTS. (ABSTRACT).

H J Hopfen R R Dedolph W F Whiteside W Chorney  
*Hortscience* 3(2,SUMMER):94



- 1968 SB1.H6  
Gibberellins, Greenhouses, Harvesting, Irradiation, Onions, Research, Temperature.
- 21783-68**  
**CHEMICAL ALTERATION OF SEX EXPRESSION IN CUCUMBERS AND CANTALOUPE.** (ABSTRACT).  
R M Irving M A Zawawi  
*Hortscience* 3(2,SUMMER):101  
1968 SB1.H6  
Cantaloupes, Chemicals, Crop yields, Cucumbers, Greenhouses, Morphology, Plant regulators, Research, Spraying.
- 21784-68**  
**PROTECTION AGAINST PSEUDOMONAS AERUGINOSA INFECTION BY IMMUNISATION WITH FRACTIONS OF CULTURE FILTRATES OF PS. AERUGINOSA.**  
R J Jones  
*Brit J Exp Pathol* 49(5):411-420 REF  
Oct 1968 448.8 B772  
Drug plants, Drug therapy, Humans, Immunization, Mortality, Pseudomonas aeruginosa, Research.
- 21785-68**  
**THE IMPORTANCE OF PLANT PROTECTION FOR THE WORLD HARVEST.** (GE)  
W Kaiser  
*Gesunde Pflanzen* 20(7):155-156  
Jul 1968 464.8 G33  
Agricultural productivity, Crops, Harvesting, Plant diseases, Plant protection, Weeds, World agricultural situation. Continuation from issue number 6.
- 21786-68**  
**THE IMPORTANCE OF PLANT PROTECTION FOR WORLD HARVEST.** (GE)  
W Kaiser  
*Gesunde Pflanzen* 20(6):131-132  
Jun 1968 464.8 G33  
Agricultural productivity, Crop yields, Population, Supply and demand, World agricultural situation. Continued in number 7.
- 21787-68**  
**PLANT PROTECTION PROBLEMS IN THE CULTIVATION OF FORAGE PLANTS IN BAVARIA.** (GE)  
K Koenig  
*Gesunde Pflanzen* 20(10):234-235  
Oct 1968 464.8 G33  
Biochemistry, Chemical control (pests), Clover, Corn, Crop rotation, Forage plants, Plant diseases, Plant protection.
- 21788-68**  
**CHARACTERIZATION OF THREE BACTERIOPHAGES OF XANTHOMONAS ORYZAE (UYEDA ET ISHIYAMA) DOWSON.**  
T T Kuo T C Huang R Y Wu C M Yang  
*Acad Sinica Bot Bull (N s)* 8:246-254 REF  
Oct 1967 451 AC10B  
Bacteriophages, Chemicals, Electron microscopy, Plants, Temperature, Xanthomonas oryzae. Japanese summary
- 21789-68**  
**INHIBITION OF AXILLARY BUD GROWTH OF CHRYSANTHEMUM MORIFOLIUM WITH FATTY ACIDS ESTERS.** (ABSTRACT).  
P J Lert A M Kofranek  
*Hortscience* 3(2,SUMMER):118  
1968 SB1.H6  
Chrysanthemum morifolium, Fatty acids, Harvesting, Physiology, Plant anatomy, Plant injuries, Research, Spraying.
- 21790-68**  
**AUXIN AND GIBBERELLIN-LIKE ACTIVITY IN BLUEBERRY FLOWERS AND FRUIT.** (ABSTRACT).  
C M Mainland P Eck  
*Hortscience* 3(2,SUMMER):113  
1968 SB1.H6  
Blueberries, Gibberellins, Morphology, Plant regulators, Pollination, Research.
- 21791-68**  
**THE BAVARIAN DEPARTMENT FOR AGRICULTURE, PLANTING AND PLANT PROTECTION, AND ITS 'GROUP PLANT PROTECTION'.** (GE)  
H R Mayer  
*Gesunde Pflanzen* 20(10):198-200  
Oct 1968 464.8 G33  
Fruit, Grain, Organizations, Pesticides, Plant diseases, Plant protection.
- 21792-68**  
**THE EFFECT OF THE NEAR ULTRA-VIOLET LIGHT (3000A4000A) ON THE PHYSIOLOGICAL DEVELOPMENT OF CUCUMBERS CUCUMIS SATIVUS, CULTIVAR SPARTAN DAWN.** (ABSTRACT).  
J I McKenzie H Ticsen  
*Hortscience* 3(2,SUMMER):101  
1968 SB1.H6  
Cucumbers, Equipment, Physiology, Reproduction, Research, Ultraviolet rays.
- 21793-68**  
**PENETRATION OF NAPHTHALENEACETIC ACID AND NAPHTHALENEACETAMIDE THROUGH ISOLATED PEAR LEAF CUTICLE.**  
R F Norris M J Bukovac  
*Hortscience* 3(2,SUMMER):120  
1968 SB1.H6  
Anatomy, Cuticle, Naphthaleneacetic acid, Pears, Research, Temperature.
- 21794-68**  
**GIBBERELLIN A4/A7, FOR INDUCTION OF STAMINATE FLOWERS ON THE GYNOCIOUS CUCUMBER.** (ABSTRACT).  
L M Pike C E Peterson  
*Hortscience* 3(2,SUMMER):101  
1968 SB1.H6  
Cucumbers, Gibberellin a4, Gibberellin a7, Plant anatomy, Research, Spraying.
- 21795-68**  
**INCREASED REVERSION OF AN APPLE SPORT FOLLOWING X IRRADIATION AND PRUNING.** (ABSTRACT).  
C Pratt D K Pireclu  
*Hortscience* 3(2,SUMMER):92  
1968 SB1.H6  
Abnormalities, Apples, Harvesting, Irradiation, Pruning, Research, X-rays.
- 21796-68**  
**EFFECTS OF ALAR TREATMENT ON GROWTH, FLOWERING, AND FRUITING OF GREENHOUSE TOMATO CULTIVARS.** (ABSTRACT).  
P E Read  
*Hortscience* 3(2,SUMMER):101  
1968 SB1.H6  
Greenhouses, Physiology, Reproduction, Research, Succinic acid, 2,2-dimethylhydrazide, Tillage, Tomatoes.
- 21797-68**  
**THE EFFECTS OF INTEGRATED PLANT PROTECTION METHODS.**  
K Russ  
*Pflanzenarzt* 21(5):67-68  
01 May 1968 464.9 P482  
Biology, Chemosterilants, Ecology, Insect pests, Insecticides, Integrated control (insects), Methodology, Plant protection, Tables (data).
- 21798-68**  
**AFLATOXIN PRODUCTION BY ASPERGILLUS FLAVUS AS RELATED TO VARIOUS TEMPERATURES.**  
A F Schindler J G Palmer W V Eisenberg  
*Appl Microbiol* 15(5):1006-1009  
Sep 1967 448.3 AP5  
Aflatoxin, Aspergillus flavus, Culture media, Fungi, Microbiology, Physiology, Research, Temperature.
- 21799-68**  
**FOREST PLANT PROTECTION PROBLEMS IN BAVARIA.** (GE)  
W Schwenke  
*Gesunde Pflanzen* 20(10):208-210  
Oct 1968 464.8 G33  
Bacillus thuringiensis, Chemical control (insects), Forests, Insect pests, Plant injuries, Plant protection, Spraying, Weeds.
- 21800-68**  
**BREEDING PEACHES FOR ROOT-KNOT NEMATODE RESISTANCE.**  
R H Sharpe C O Hesse B F Lownsberry C J Hansen  
*Hortscience* 3(2,SUMMER):92  
1968 SB1.H6  
Breeding, Meloidogyne incognita, Meloidogyne javanica, Nematodes, Peaches, Plant diseases, Research.
- 21801-68**  
**AUXIN (PLANT HORMONES) PRODUCTION IN PLANTS.** (GE)  
A R Sheldrake  
*Umschau* 68(18):568  
29 Aug 1968 474 UM7  
Amino acids, Bacteria, Cells, Crown galls, Fungi, Indoleacetic acid, Plant hormones, Plant metabolism, Tryptophan.
- 21802-68**  
**INSECTICIDES FROM PLANTS.**  
A A Siddiqui  
*Sci Chronicle* 5(12):8-9  
Jun 1967 Q1.0S33  
Anabasine, Biochemistry, Insecticides, Nicotine, Nicotinic, Poisonous plants, Pyrethrum, Rotenone, Sabadilla.
- 21803-68**  
**THE EFFECTS OF KINETIN IN OVERCOMING HIGH-TEMPERATURE INHIBITION OF LETTUCE SEED GERMINATION.** (ABSTRACT).  
O E Smith W Yen J M Lyons  
*Hortscience* 3(2,SUMMER):124  
1968 SB1.H6  
Kinetic, Lettuce, Research, Seed germination, Temperature, Water.
- 21804-68**  
**INFLUENCE OF GIBBERELLIN UPON TIME OF BUD DEVELOPMENT IN GLOBE ARTICHOKE (CYNARA SCOLYMUS).** (ABSTRACT).  
M J Snyder N C Welch V E Rubatzki  
*Hortscience* 3(2,SUMMER):101  
1968 SB1.H6  
Artichokes, Crop yields, Gibberellins, Plant morphology, Research.
- 21805-68**  
**INFLUENCE OF GROWTH REGULATORS ON THE CONCENTRATION OF PROTEIN AND NUCLEIC ACIDS IN GRAPE FLOWERS.** (ABSTRACT).  
A Soleimani W M Kliever R J Weaver  
*Hortscience* 3(2,SUMMER):113  
1968 SB1.H6  
Grapes, Nucleic acids, Physiology, Plant regulators, Proteins, Research, Spraying.
- 21806-68**  
**THE NEED FOR INTERNATIONAL TESTING CENTERS FOR CROP PESTS AND PATHOGENS.**  
E C Stakman  
*Entomol Soc Amer Bull* 14(2):124-128  
Jun 1968 423.9 EN8  
Food supply, International cooperation, Laboratories, Plant disease resistance, Plant diseases, Plant pest resistance, Plant protection, Research, Supply and demand.
- 21807-68**  
**PRODUCTION OF AFLATOXIN ON WHEAT AND OATS: MEASUREMENTS WITH A RECORDING DENSITOMETER.**  
R D Stubblefield O L Shotwell C W Hesselstine M L Smith  
*Appl Microbiol* 15(1):186-190 REF  
Jan 1967 448.3 AP5

21808-68

Aflatoxin, *Aspergillus flavus*, Chromatography, Culture media, Fermentation, Oats, Wheat.

21808-68

CONCENTRATE SPRAY-THINNING OF APPLES. (ABSTRACT).

A H Thompson B L Rogers

*Hortscience* 3(2,SUMMER):91

1968 SB1.H6

Apples, Carbaryl, Harvesting, Pesticides, Research, Spraying, Thinning sprays.

21809-68

DISTRIBUTION OF SOLUBLE COMPONENT AND QUALITY FACTORS IN THE EDIBLE PORTION OF CITRUS FRUIT. (ABSTRACT).

S V Ting

*Hortscience* 3(2,SUMMER):113

1968 SB1.H6

Amino acids, Ascorbic acid, Chemistry, Citrus, Hydrogen-ion concentration, Research.

21810-68

PROJECT AND PROBLEMS OF PLANT PROTECTION IN THE DEVELOPING COUNTRIES. (GE)

W Tornow

*Gesunde Pflanzen* 20(7):137,138,140,1

2,144,146,148-149

Jul 1968 464.8 G33

Agricultural policies, Extension work, Pest control, Plant disease transmission, Plant protection.

21811-68

ARTIFICIAL LIGHT INDUCED LEAF LESIONS IN A DIPLOID SOLANUM ACCESSION. (ABSTRACT).

K N Wilsen D R Bienz

*Hortscience* 3(2,SUMMER):124

1968 SB1.H6

Equipment, Fluorescent lamps, Leaves, Plant physiology, Research, Solanaceae.

21812-68

THE ULTRASTRUCTURE OF PIRICULARIA ORYZAE CAV.

H K Wu T H Tsao

*Acad Sinica Bot Bull (N s)* 8:353-363 REF

Oet 1967 451 AC10B

Anatomy, Cells, Crop yields, Cytoplasm, Piricularia oryzae, Plant protection, Research, Rice, Japanese summary

21813-68

THE USE OF ACTIDIONE ON THE CONTROL OF RICE BLAST.

L H Yang T T Kuo L T Chou

*Acad Sinica Bot Bull (N s)* 390-397

Oet 1967 451 AC10B

Blast (rice), Crop yields, Cycloheximide, Greenhouse culture, Piricularia oryzae, Rice, Seedlings, Japanese summary

## DISEASES

21814-68

SURVIVAL OF ROOT-INFECTING FUNGI IN SOIL. III. THE EFFECT OF CELLULOSE AMENDMENT ON CHLAMYDOSPORE GERMINATION OF FUSARIUM SOLANI F. SP. PHASEOLI IN SOIL.

P B Adams G C Papavizas J A Lewis

*Phytopathology* 58(3):373-377 REF

Mar 1968 464.8 P56

Beans, Cellulose, Fungus diseases (plants), Fusarium solani phaseoli, Oat straw, Sodium nitrate, Soil amendments, Soil fungi, Spore germination.

21815-68

TOMATO BUSHY STUNT VIRUS FROM PRUNUS AVIUM L. I. FIELD STUDIES AND VIRUS CHARACTERIZATION.

W R Allen T R Davidson

*Can J Bot* 45(12):2375-2383 REF

Dec 1967 470 C16C

Bushy stunt (tomatoes), Mazzard cherries, Research, Virus diseases (plants).

21816-68

TOMATO BUSHY STUNT VIRUS FROM PRUNUS AVIUM. II. SEROLOGICAL TYPING AND THE CHARACTERIZATION OF ANTIBODY TYPES AND ACTIVITIES.

W R Allen

*Can J Bot* 46(3):229-233 REF

Mar 1968 470 C16C

Antibodies, Bushy stunt (tomatoes), Mazzard cherries, Serological tests, Virus diseases (plants).

21817-68

ELECTRON MICROSCOPIC OBSERVATIONS ON THE APPARENT REPLICATION IN VIVO OF A PLANT VIRUS.

H J Arnott K M Smith

*Virology* 34(1):25-35 REF

Jan 1968 448.8 V81

Biology, Electron microscopes, Plants, Research, Virus diseases (plants).

21818-68

AMERICAN COTTON IS ALLERGIC TO 2,4-D.

B Bakshi

*Indian Farming* 16(11):25

Feb 1967 22 IN283

D, 2,4-, Plant physiology, Toxicology, Upland cotton, Vapors.

The author discusses the susceptibility of upland cotton to 2,4-D vapors in India.

21819-68

CLONAL SELECTION OF GRAPEVINES IN SOME AREAS OF ITALY. (IT)

E Baldacci G Belli E Refatti R Cesati F Pessina

*Riv Patol Veg (SER 4)* 3(1 JAN-MAR):15-22 REF

1967 464.8 R52

Chenopodium amaranticolor, Chenopodium quinoa, Clones, Forage plants, Gomphrena globosa, Grapes, Host indexing (plants), Virus diseases (plants). English summary

21820-68

RESEARCH AND IDENTIFICATION OF LOW LITRE AND AVIRULENT VIRUSES OR GRAPEVINES. (IT)

E Baldacci G Belli

*Riv Patol Veg (SER 4)* 3(1 JAN-MAR):4-14 REF

1967 464.8 R52

Biochemistry, Forage plants, Grapes, Host indexing (plants), Research, Virus diseases plants. English summary

21821-68

DEVELOPMENT OF DOWNY MILDEW RESISTANT BROCCOLI, CABBAGE, AND COLIARDS. (ABSTRACT).

W C Barnes

*Hortscience* 3(2,SUMMER):110

1968 SB1.H6

Broccoli, Cabbage, Crop yields, Kale, Morphology, Plant disease control, Research.

21822-68

DIFFERENCE IN PHENOLIC EXTRACTS FROM HEALTHY DOUGLAS-FIR ROOTS AND THOSE INFECTED WITH PORIA WEIRII.

G M Barton

*Can J Bot* 45(9):1545-1552 REF

Sep 1967 470 C16C

Fungus diseases (plants), Phenols, Plant extracts, Poria weirii, Pseudotsuga menziesii, Root rot (evergreens), Roots.

21823-68

FACTORS AFFECTING VIRULENCE AND PIGMENT PRODUCTION OF XANTHOMONAS PHASEOLI VAR. FUSCANS.

P K Basu V R Wallen

*Can J Bot* 45(12):2367-2374 REF

Dec 1967 470 C16C

Beans, Fungus diseases (plants), Seeds, Xanthomonas phaseoli.

21824-68

FREE AMINO ACIDS OF SUNFLOWER HYPOCOTYL TISSUE DURING CROWN GALL TUMOR DEVELOPMENT.

R M Behki S M Lesley

*Can J Bot* 46(3):217-223 REF

Mar 1968 470 C16C

Amino acids, Crown galls, Plant diseases, Sunflowers, Tissues.

21825-68

DIAMOND SPOT OF BANANAS CAUSED BY FUSARIUM ROSEUM 'GIBBOSUM'.

L A Berg

*Phytopathology* 58(3):388-389

Mar 1968 464.8 P56

Bananas, Fungus diseases (plants), Fusarium roseum.

21826-68

TUMOR FORMATION THROUGH DEOXYRIBONUCLEIC ACID FROM AGROBACTERIUM TUMEFACIENS (SMITH AND TOWNSEND) CONN. (GE)

J Bieber E Sarfert

*Phytopathol Z* 62(4):323-326 REF

Aug 1968 464.8 P562

Agrobacterium tumefaciens, Cells, Crown galls, Deoxyribonucleic acid, Plant diseases, Proteins. English summary

21827-68

ACCUMULATION OF AFLATOXINS IN STORED RICE IN RELATION TO COMPETITION BETWEEN ASPERGILLUS PARASITICUS AND A. CHEVALIERI. (ABSTRACT).

R A Boller H W Schroeder

*Phytopathology* 58(6):725-726

Jun 1968 464.8 P56

Aflatoxin, Aspergillus chevalieri, Aspergillus parasiticus, Fungus diseases (plants), Rice, Storage, Temperature.

21828-68

CHEMICAL, PHYSICAL AND BIOLOGICAL PROPERTIES OF FOUR STRAINS OF SUGARCANE MOSAIC VIRUS.

W P Bond

*Diss Abstr Sect B* 29(5):1540B-1541B

Nov 1968 Z5055.U49D53

Biology, Chemistry, Mosaic (sugarcane), Physiology, Properties, Sugarcane, Virus diseases (plants).

21829-68

EFFECTS OF TWO CARBAMATES ON SEVERAL PESTS OF PEACH.

H R Boyce

*Entomol Soc Ontario Proc* 95:125-127

1964 420 ON8

Carbamates, Grapholitha molesta, Insect pests, Panonychus ulmi, Peaches, Plant injuries, Research.

21830-68

STUDIES OF THE HOST-PARASITE RELATIONSHIP IN THE PINEAPPLE DISEASE OF SUGARCANE.

H W Boyd C C Allison

*Phytopathology* 58(6):839-842

Jun 1968 464.8 P56

Ceratocystis paradoxa, Fungus diseases (plants), Greenhouse culture, Pineapple disease, Sugarcane.

21831-68

THE RELATION OF GROWTH REGULATORS TO THE DEVELOPMENT OF SYMPTOMS AND EXPRESSION OF STEM RESISTANCE IN WHITE PINE INFECTED WITH BLISTER RUST.

M G Boyer

*Can J Bot* 45(4):501-513 REF

Apr 1967 470 C16C

Blister rust (pinus), Pinus, Plant disease resistance, Plant regulators.

21832-68

TOBACCO LEAF VEINS IN SOURCES OF A CUCUMBER MOSAIC VIRUS FOR APHIDS.



- R H E Bradley  
*Virology* 34(1):172-173  
Jan 1968 448.8 V81  
Aphididae, Cucumbers, Mosaic (cucumbers), Tobacco, Veins, Virus diseases (plants).
- 21833-68**  
**TOXICITY OF FERMENTATION PRODUCTS ACCUMULATING IN WATERCORED 'DELICIOUS' APPLES. (ABSTRACT).**  
W J Bramlage R E Bir  
*Hortscience* 3(2,SUMMER):122  
1968 SB1.H6  
Apples, Fermentation, Plant diseases, Plant injuries, Research, Temperature, Toxicology, Water core (apples).
- 21834-68**  
**MEASUREMENT OF OXYGEN CONSUMPTION OF WHEAT STEM RUST UREDOSPORES WITH AN OXYGEN ELECTRODE.**  
L Bush  
*Phytopathology* 58(6):752-754  
Jun 1968 464.8 P56  
Electrodes, Fungus diseases (plants), Oxygen, Plant physiology, Stem rust, Uredospores, Wheat.
- 21835-68**  
**CITRUS FRUIT VIRUS DISEASES IN THE LIGHT OF THE RESULTS OF THE 4TH CONFERENCE OF THE I.O.C.V. (it)**  
A Catara  
*Riv Patol Veg (SER 4)3(1,JAN-MAR):47-82 REF*  
1967 464.8 R52  
Citrus, Fruit, Virus diseases (plants).
- 21836-68**  
**TAICHUNG NATIVE-I VS BACTERIAL BLIGHT.**  
G V Chalam  
*Indian Farming* 16(3):3,47,52  
Jun 1966 22 IN283  
Bacterial diseases (plants), Crop yields, Rice.
- 21837-68**  
**HOST RANGE OF PEANUT STUNT VIRUS IN TRIFOLIUM SPP. (ABSTRACT).**  
D Choopanya J E Halpin  
*Phytopathology* 58(6):726  
Jun 1968 464.8 P56  
Clover, Host indexing (plants), Peanuts, Stunt, Virus diseases (plants).
- 21838-68**  
**ACCUMULATION OF HYPOXANTHINE IN POTATO LEAVES AND ITS EFFECT ON SPORE GERMINATION IN PHYTOPHTHORA INFESTANS.**  
M C Clark O T Page  
*Can J Bot* 46(3):267-270  
Mar 1968 470 C16C  
Fungus diseases (plants), Hypoxanthine, Leaves, Phytophthora infestans, Potatoes, Seed germination, Spores.
- 21839-68**  
**RELATIVE SIGNIFICANCE OF PARASITISM VERSUS SAPROPHYTISM IN COLONIZATION OF WHEAT STRAW BY FUSARIUM ROSEUM CULMORUM IN THE FIELD.**  
R J Cook G W Bruchl  
*Phytopathology* 58(3):306-308  
Mar 1968 464.8 P56  
Fusarium roseum, Parasitism, Saprophytes, Wheat straw.
- 21840-68**  
**INFLUENCE OF RHIZOPUS NIGRICANS EHRENB. ON THE DEVELOPMENT OF ALTERNARIA SOLANI (ELL. AND MART.) JONES AND GROUT.**  
C R Das A Pal  
*Phytopathol Z* 63(1):40-46 REF  
Sep 1968 464.8 P562  
Alternaria solani, Fungus diseases (plants), Leaves, Plant physiology, Potatoes, Research, Rhizopus nigricans. German summary
- 21841-68**  
**THE RELATIONSHIP BETWEEN CALCIUM MAGNESIUM, AND POTASSIUM ACCUMULATION AND TITRATABLE ACIDITY IN THE LEAVES OF SELECTED MCINTOSH APPLE CLONES. (ABSTRACT).**  
J C M Ddungu R Eggert  
*Hortscience* 3(2,SUMMER):106-107  
1968 SB1.H6  
Absorption, Apples, Calcium, Deficiency diseases, Extracts, Leaves, Magnesium, Potassium, Research, Water.
- 21842-68**  
**WRINKLED SKIN DISEASE OF APPLES. (FR)**  
H De Meirleire  
*Phytoma* 19(193):31  
Dec 1967 464.8 P563  
Apples, Diagnosis, Plant diseases, Research, Skin diseases, Virus diseases (plants).
- 21843-68**  
**BLOSSOM END ROT OF THE TOMATO. (FR)**  
H De Meirleire  
*Phytoma* 19(193):30  
Dec 1967 464.8 P563  
Blossom end rot (tomatoes), Calcium, Diagnosis, Pimientos, Plant diseases, Plant water relations.
- 21844-68**  
**THE NATA DE COCO. 2. CHEMICAL NATURE AND PROPERTIES OF NATA.**  
L S Dimaguila  
*Philippine Agr* 51(6):475-488 REF  
Nov 1967 25 P542  
Acetobacter, Biochemistry, Coconuts.
- 21845-68**  
**QUANTITATIVE MEASUREMENTS OF INTERACTIONS BETWEEN CROWN-GALL TUMORS AND THE PINTO BEAN HOST.**  
M D El Khalifa J A Lippincott  
*Amer J Bot* 55(3):382-391 REF  
Mar 1968 450 AM36  
Agrobacterium tumefaciens, Crown galls, Kidney beans, Plant physiology.
- 21846-68**  
**BIOCHEMICAL CHANGES DURING THE DEVELOPMENT OF CORK SPOT OF 'YORK IMPERIAL' APPLES. (ABSTRACT).**  
M Faust C B Shear  
*Hortscience* 3(2,SUMMER):122  
1964 SB1.H6  
Apples, Biology, Chemistry, Cork spot (apples), Morphology, Research, Tissues.
- 21847-68**  
**THE OCCURRENCE OF AN ASH-COLORED MOLD ON PEANUTS IN THE STATE OF SAO PAULO. (POR)**  
M B Figueiredo R M Cardoso  
*Biologico* 34(10):217-220  
Oct 1968 442.8 B529  
Botrytis, Crop losses, Fungus diseases (plants), Peanuts.
- 21848-68**  
**CYLINDROCLADIUM ROOT ROT OF BLACK WALNUT. (ABSTRACT).**  
T H Filer  
*Phytopathology* 58(6):728  
Jun 1968 464.8 P56  
Cylindrocladium, Fungus diseases (plants), Juglans nigra, Root rot, Temperature.
- 21849-68**  
**A SELECTIVE MEDIUM FOR ISOLATION OF PHYTOPHTHORA PARASITICA VAR. NICOTIANAE FROM SOIL. (ABSTRACT).**  
R A Flowers J W Hendrix  
*Phytopathology* 58(6):728  
Jun 1968 464.8 P56  
Black shank, Culture media, Fungus diseases (plants), Phytophthora parasitica nicotianae, Soil-borne plant diseases, Tobacco.
- 21850-68**  
**GROWTH REGULATORS TO CONTROL LETTUCE BOLTING. (ABSTRACT).**  
R E Foster  
*Hortscience* 3(2,SUMMER):102  
1968 SB1.H6  
Chemicals, Greenhouse culture, Lettuce, Plant diseases, Research, Spraying, Temperature.
- 21851-68**  
**GONATOBOTRYS ZEAE SP. N. A NEW PATHOGEN ON CORN. (ABSTRACT).**  
C Futrell D C Bain  
*Phytopathology* 58(6):728  
Jun 1968 464.8 P56  
Corn, Fungus diseases (plants), Gonatobotrys zeae, Plant taxonomy.
- 21852-68**  
**HISTOCHEMICAL STUDIES ON THE ALTERATION OF LIGNIN AND PECTIC SUBSTANCES IN WHITE ELM INFECTED BY CERATOCYSTIS ULMI.**  
C Gagnon  
*Can J Bot* 45(9):1619-1623 REF  
Sep 1967 470 C16C  
Ceratocystis ulmi, Fungus diseases (plants), Histochemistry, Lignin, Pectins, Research, Ulmus americana.
- 21853-68**  
**LONGEVITY OF TOMATO PLANTS IN DISEASED FIELDS AS AFFECTED BY BREEDING. (ABSTRACT).**  
J C Gilbert J S Tanaka J T Chinn  
*Hortscience* 3(2,SUMMER):110  
1968 SB1.H6  
Agricultural policies, Breeding, Longevity, Plant disease resistance, Research, Tomatoes.
- 21854-68**  
**RATE OF MOVEMENT OF BARLEY YELLOW DWARF VIRUS OUT OF INOCULATED CEREAL LEAVES.**  
C C Gill  
*Phytopathology* 58(6):870-871  
Jun 1968 464.8 P56  
Aphididae, Barley, Grain, Immunization, Insect vectors, Leaves, Oats, Plant translocation, Virus diseases (plants), Yellow dwarf.
- 21855-68**  
**TRANSMISSION OF TOBACCO MOSAIC VIRUS IN GRAPE SEEDS.**  
R M Gilmer L J Kelts  
*Phytopathology* 58(3):277-278  
Mar 1968 464.8 P56  
Grapes, Mosaic, Mosaic (tobacco), Seed-borne plant diseases, Seeds, Virus diseases (plants).  
Abstract: The possible role of the pollen parent in causing seed infection is not known.
- 21856-68**  
**BURLEY TOBACCO NATURALLY INFECTED WITH PEANUT STUNT VIRUS IN NORTH CAROLINA. (ABSTRACT).**  
G V Jr. Goodling  
*Phytopathology* 58(6):728  
Jun 1968 464.8 P56  
North carolina, Peanuts, Stunt, Tobacco, Virus diseases (plants).
- 21857-68**  
**VERTICILLIUM WILT OF TOMATOES. TESTS WITH RESISTANT LINES.**  
R Gottl R J Conroy  
*Agr Gaz New S Wales* 78(PT 9):504-506  
Sep 1967 23 N472  
Fungus diseases (plants), Plant breeding, Plant disease resistance, Tomatoes, Verticillium dahliae.  
The development and testing of Verticillium wilt resistant tomatoes in Australia is discussed.
- 21858-68**  
**RELATIVE QUANTITIES OF ANTIFUNGAL METABOLITES PRODUCED IN RESISTANT AND SUSCEPTIBLE SOYBEAN PLANTS IN-**

- OCULATED WITH PHYTOPHTHORA MEGASPERMA VAR. SOJAE AND CLOSELY RELATED NONPATHOGENIC FUNGI.**  
G Gray W L Klarman M Bridge  
*Can J Bot* 46(3):285-288  
Mar 1968 470 C16C  
Fungus- diseases (plants), Metabolites, Phytophthora megasperma, Plant disease resistance, Soybeans.
- 21859-68**  
**CANKER OF PEACHES BY FUSICOCCUM AMYGDALI. BIOLOGY OF THE PARASITE AND METHODS OF CONTROL. (FR)**  
C Groselaude  
*Rev Zool Agr Appl* 66(7-9, 3RD TRIMESTER):103-110  
1967 410.9 S012  
Canker, Chemical control (plant diseases), Fungus diseases (plants), Fusioecum amygdali, Peaches.
- 21860-68**  
**PRODUCTION OF PECTIC AND CELLULOLYTIC ENZYMES BY PHYTOPHTHORA INFESTANS DE BY. II. INFECTION OF POTATO TUBERS. (GE)**  
F Grossman  
*Phytopathol Z* 63(1):15-22 REF  
Sep 1968 464.8 P562  
Assay, Cellulase, Enzymes, Pectins, Phytophthora infestans, Plant extracts, Potatoes, Research, Tissues. English summary.
- 21861-68**  
**INFECTION AND DEVELOPMENT OF HELMINTHOSPORIUM SOROKINIANUM IN AGROSTIS PALUSTRIS.**  
M J Healy M P Britton  
*Phytopathology* 58(3):273-276 REF  
Mar 1968 464.8 P56  
Fungus diseases (plants), Golf courses, Helminthosporium sorokinianum, Turf.
- 21862-68**  
**THREE-YEAR EFFECTS OF SYSTEMIC FUNGICIDES APPLIED FOR THE CONTROL OF CYTOSPORA IN ITALIAN PRUNE TREES.**  
A W Helton W J Koehlan  
*Can J Bot* 45(11):2017-2020  
Nov 1967 470 C16C  
Cytospora, Fungicides, Plant physiology, Plums, Time.
- 21863-68**  
**A DISTINCTION BETWEEN PUCCINIASTRUM GOEPPERTIANUM AND P. EPILOBII WITH CLARIFICATION OF STATUS OF PERIDERMIUM HOLWAYI AND PER. ORNAMENTALE.**  
Y Hiratsuka L E McArthur F J Emond  
*Can J Bot* 45(10):1913-1915  
Oct 1967 470 C16C  
Fungus diseases (plants), Peridermium holwayi, Peridermium ornamentale, Pucciniastrum epilobii, Pucciniastrum goeppertianum.
- 21864-68**  
**FACTORS GOVERNING ZOOSPORE RESPONSES OF PHYTOPHTHORA MEGASPERMA VAR. SOJAE TO PLANT ROOTS.**  
H H Ho C J Hickman  
*Can J Bot* 45(11):1983-1994 REF  
Nov 1967 470 C16C  
Fungus diseases (plants), Pcas, Phytophthora megasperma, Plant physiology, Roots, Soybeans, Zoospores.
- 21865-68**  
**GENETIC ANALYSIS IN RICE, VIII. INHERITANCE OF RESISTANCE TO RACES 4, 22 AND 25 OF PIRICULARIA ORYZAE.**  
S C Hsieh M H Lin H L Liang  
*Acad Sinica Bot Bull (N s)* 8:255-260 REF  
Oct 1967 451 AC10B  
Blast (rice), Injections, Leaves, Piricularia oryzae, Plant protection, Research, Rice. Japanese summary
- 21866-68**  
**EFFECT OF ANTIFUNGAL COMPOUNDS ON ASPERGILLOSIS IN HATCHING CHICK EMBRYOS.**  
C N Huhtanen J M Pensack  
*Appl Microbiol* 15(1):102-109  
Jan 1967 448.3 AP5  
Amphotericin b, Aspergillus flavus, Aspergillus fumigatus, Chick embryos, Research, Water.
- 21867-68**  
**ANALYSIS OF EPIDEMICS OF THE TOBACCO (PERONOSPORA TABACINA ADAM) MILDEW IN THE GEMBLOUX AREA. (FR)**  
R Jadot  
*Gembloux Inst Agron Etat Bull* 3(2):308-327 REF  
1968 105.1 G285  
Belgium, Humidity, Peronospora tabacina, Plant disease transmission, Spore germination, Temperature, Tobacco. English and Afrikaans abstract
- 21868-68**  
**TOBACCO MOSAIC VIRUS STRAINS IN GREENHOUSE TOMATOES.**  
M H Jensen B L Pollack E H Varney  
*Hortscience* 3(2,SUMMER):124  
1968 SB1.H6  
Greenhouses, Mosaic (tobacco), Research, Serological tests, Tomatoes.
- 21869-68**  
**THE MODE OF SEEDLING INFECTION OF GRAIN SORGHUM WITH SCLEROSPORA SORGHII. (ABSTRACT).**  
B L Jones  
*Phytopathology* 58(6):729  
Jun 1968 464.8 P56  
Fungus diseases (plants), Plant disease transmission, Sclerospa sorghi, Seedlings, Sorghum.
- 21870-68**  
**ORCHARD SANITATION AND BROWN ROT CONTROL.**  
P F Kable  
*Agr Gaz New S Wales* 78(PT 11):665  
Nov 1967 23 N472  
Brown rot, Crop losses, Fruit, Orchards, Sanitation control (pests).
- 21871-68**  
**STUDIES ON SOME STRAINS OF TOBACCO MOSAIC VIRUS IN ORCHIDS. I. BIOLOGICAL, CHEMICAL, AND SEROLOGICAL STUDIES.**  
C I Kado M H V Van Regenmortel C A Knight  
*Virology* 34(1):17-24 REF  
Jan 1968 448.8 V81  
Biology, Chemistry, Mosaic (tobacco), Orchidaceae, Research, Serological tests, Virus diseases (plants).
- 21872-68**  
**VIRULENCE OF RHIZOCTONIA SOLANI AS INFLUENCED BY AGE OF INOCULUM IN SOIL.**  
M Kamal A R Weinhold  
*Can J Bot* 45(9):1761-1765 REF  
Sep 1967 470 C16C  
Fungus diseases (plants), Rhizoctonia solani, Soils, Time.
- 21873-68**  
**NON-RANDOM SEGREGATION OF GENE 1 FOR FUSARIUM RESISTANCE IN THE TOMATO.**  
N Kedar N Betig J Katan  
*Euphytica* 16(2):258-266  
Sep 1967 450 EU6  
Fungus diseases (plants), Fusarium, Genetics, Plant disease resistance, Tomatoes.
- 21874-68**  
**THE EFFECT OF SEVERAL DITHIOCARBAMATE FUNGICIDES ON BLACK SPOT CONTROL AND FRUIT QUALITY IN VALENCIA ORANGES.**  
T B Kiely  
*Agr Gaz New S Wales* 78(PT 5):309-317  
May 1967 23 N472  
Black spot (oranges), Bordeaux mixture, Carbamates, Guignardia, Oranges.
- 21875-68**  
**THE EFFECT OF LEAF WATER BALANCE ON THE SUSCEPTIBILITY OF FRENCH BEAN TO TOBACCO NECROSIS VIRUS.**  
W C Kimmins R E Litz  
*Can J Bot* 45(11):2115-2118  
Nov 1967 470 C16C  
Beans, Leaves, Necrosis, Plant disease resistance, Tobacco, Virus diseases (plants), Water.
- 21876-68**  
**SUSCEPTIBILITY TO TOBACCO MOSAIC VIRUS IN RELATION TO RNA AND PROTEIN SYNTHESIS IN TOBACCO AND BEAN PLANTS.**  
Z Kiraly M El Hammady B I Pozsar  
*Phytopathol Z* 63(1):47-63 REF  
Sep 1968 464.8 P562  
Beans, Biochemistry, Metabolism, Mosaic (tobacco), Plant disease resistance, Proteins, Ribonucleic acid, Tobacco, Virus diseases (plants). German summary.
- 21877-68**  
**MATHEMATICAL MODELS FOR INFECTIVITY DILUTION CURVES OF PLANT VIRUSES.**  
A Kleczkowski  
*Virology* 34(1):186-187  
Jan 1968 448.8 V81  
Mathematical analysis, Mathematics, Virus diseases (plants).
- 21878-68**  
**IDENTIFICATION OF TWO SEROTYPES IN SQUASH MOSAIC VIRUS STRAINS.**  
H K Knuhtsen M R Nelson  
*Phytopathology* 58(3):345-347  
Mar 1968 464.8 P56  
Cantaloupes, Electrophoresis, Mosaic, Mosaic (watermelons), Pumpkins, Serological tests, Virus diseases (plants), Watermelons.
- 21879-68**  
**BREEDING GLASSHOUSE CUCUMBERS IN THE NETHERLANDS.**  
E Kooistra  
*Hortscience* 3(2,SUMMER):107  
1968 SB1.H6  
Breeding, Cucumbers, Fungus diseases (plants), Greenhouse culture, Research.
- 21880-68**  
**INFLUENCE OF SEED SIZE ON THE INCIDENCE OF LOOSE SMUT IN FUNZA BARLEY. (SP)**  
C F Krull G Robayo L A Valbuena G Rico L E Castiblanco  
*Agr Trop* 23(1):20-25  
Jan 1967 26 AG8  
Barley, Fungus diseases (plants), Loose smut (barley), Seeds, Ustilago nuda.
- 21881-68**  
**RESPIRATORY PATTERNS IN TRIFOLIUM PRATENSE INOCULATED AND NONINOCULATED WITH ERYSIPE POLYONI.**  
G C M Latch E W Hanson  
*Phytopathology* 58(3):297-300 REF  
Mar 1968 464.8 P56  
Erysiphe polygoni, Fungus diseases (plants), Leaves, Plant disease resistance, Plant respiration, Powdery mildew, Red clover.
- 21882-68**  
**A FURTHER LOOK AT NECK ROT IN ONIONS.**  
G S Lawes  
*New Zeal J Agr* 114(1):50-51  
Jan 1967 23 N48J  
Botrytis allii, Fertilizers, Fungicides, Neck rot (onions), Onions, Soil series.  
Neck rot of onions caused by Botrytis allii in New



Zealand is discussed as well as the control of the fungus with fungicides and other methods.

**21883-68**

**MAJOR AND MINOR GENES IN WHEAT FOR RESISTANCE TO PUCCINIA STRIIFORMIS AND THEIR RESPONSES TO TEMPERATURE CHANGES.**

R T Lewellen E L Sharp E R Hehn

*Can J Bot* 45(11):2155-2172 REF

Nov 1967 470 C16C

Fungus diseases (plants), Genetics, Puccinia striiformis, Temperature, Wheat.

**21884-68**

**OZONE DAMAGE AND SEMIMATURE-TISSUE NEEDLE BLIGHT OF EASTERN WHITE PINE.**

S N Linzon

*Can J Bot* 45(11):2047-2061 REF

Nov 1967 470 C16C

Fungus diseases (plants), Needle blight (pinus), Ozone, Pinus strobus, Plant injuries, Tissues.

**21885-68**

**HISTOLOGICAL STUDIES OF SYMPTOMS IN SEMIMATURE-TISSUE NEEDLE BLIGHT OF EASTERN WHITE PINE.**

S N Linzon

*Can J Bot* 45(1):133-143 REF

Jan 1967 470 C16C

Histology, Needle blight (pinus), Pinus strobus, Plant diseases, Research.

**21886-68**

**THE INCIDENCE OF CROWN ROT OF BOXED BANANAS IN RELATION TO MICROBIAL POPULATIONS OF THE CROWN TISSUE.**

F L Lukezie W J Kaiser M M Martinez

*Can J Bot* 45(4):413-421

Apr 1967 470 C16C

Bacterial diseases (plants), Bananas, Crown rot (bananas), Microbiology.

**21887-68**

**FIELD TEST OF LABORATORY RESULTS IN SELECTING SEED DRESSING FUNGICIDES AGAINST SEED-BORNE DISEASES OF JUTE (CORCHORUS CAPSULARIS L.).**

S Mahboob-E-Illah Q A Ahmed

*Pakistan J Sci Res* 19(4):163-170

Oct 1967 475 P173

Fungicides, Fungus diseases (plants), Jute, Seed-borne plant diseases.

**21888-68**

**PESTS OF CULTIVATED PLANTS IN FINLAND IN 1967.**

M Markkula

*Ann Agr Fenn* 7(2):107-110

1968 20 AN7

Catalogs, Crop yields, Insect pests, Nematodes, Plant diseases, Zoogeography.

**21889-68**

**THERMAL STABILITY OF STEM RUST RESISTANCE IN OAT SEEDLINGS.**

J W Martens R I A McKenzie G J Green

*Can J Bot* 45(4):451-458 REF

Apr 1967 470 C16C

Fungus diseases (plants), Oats, Plant disease resistance, Seedlings, Stem rust (oats), Temperature.

**21890-68**

**DISEASE DEVELOPMENT IN GUAR (CYAMOPSIS PSORALOIDES DC.) AND GRAM (CICER ARIETINUM L.) ATTACKED WITH SCLEROTIUM ROLFII UNDER DIFFERENT SOIL PH CONDITIONS.**

S B Mathur S Sinha

*Phytopathol Z* 62(4):319-322

Aug 1968 464.8 P562

Chickpeas, Crop losses, Guar, Sclerotium rolfsii, Seedlings, Soil hydrogen-ion concentration, Soil-borne plant diseases. German summary.

**21891-68**

**VARIATION IN RESPONSE TO IRON NUTRITION AMONG SOME CORN INBREDS. (ABSTRACT).**

D N Maynard S Odurukwe

*Hortscience* 3(2,SUMMER):110

1968 SB1.H6

Chlorosis (plants), Corn, Deficiency diseases, Environment, Iron, Physiology, Research.

**21892-68**

**PREVENTIVE MEASURES CAN CONTROL BUNCHY TOP.**

M R Menon S P Christudas

*Indian Farming* 16(2):22-23

May 1966 22 IN283

Aphididae, Bunchy top (bananas), Chemical control (insects), Insect vectors, Virus diseases (plants).

Control of the bunchy top virus of bananas and its aphid vector is discussed.//uui s lndia

**21893-68**

**CHLAMYDOSPORE FORMATION IN CONIDIA OF HELMINTHOSPORIUM SATIVUM.**

R A Meronuck E H Pepper

*Phytopathology* 58(6):866-867 REF

Jun 1968 464.8 P56

Barley, Fungus diseases (plants), Helminthosporium sativum, Plant physiology, Spot blotch.

**21894-68**

**RESEARCH ON FUSARIUM DISEASES. II. ECOLOGY AND PATHOLOGY OF FUSARIUM OXYSPORUM. (FR)**

J A Meyer

*Ann Epiphyt* 18(2):241-247 REF

464.9 F84AN

Ecology, Fungus diseases (plants), Fusarium, Fusarium oxysporum, Research. English summary

**21895-68**

**AN ARYLSULFATASE IN THE WOOD-ROTTING BASIDIOMYCETE, FOMES GEOTROPUS.**

F H Milazzo G J Loughheed

*Can J Bot* 45(4):532-534

Apr 1967 470 C16C

Arylsulfatase, Fomes geotropus, Wood, Wood destroying fungi.

**21896-68**

**BACTERIAL SCAB, SCLEROTINIA AND BOTRYTIS ROTS OF GLADIOLUS CORMS.**

*Agr Gaz New S Wales* 78(PT 6):BACK COVER

Oct 1967 23 N472

Botrytis gladiolorum, Chemical control (plant diseases), Cultural control (plant diseases), Gladiolus, Plant diseases, Pseudomonas, Sclerotinia.

**21897-68**

**FOOT-ROT OF WHEAT.**

*Agr Gaz New S Wales* 78(PT 10):598-601

Oct 1967 23 N472

Cultural control (plant diseases), Fungus diseases (plants), Root rot, Seedbeds, Superphosphates, Wheat.

Control of wheat foot rot by baring fallow infested land, crop rotation, seedbed preparations, and stubble burning is discussed.

**21898-68**

**VIRUS DISEASES OF DECIDUOUS FRUIT TREES: APPLE MOSAIC.**

*Agr Gaz New S Wales* 78(PT 9):BACK COVER

Sep 1967 23 N472

Crop losses, Germ-free life, Mosaic (apples), Plant quarantine, Virus diseases (plants).

**21899-68**

**POWDERY MILDEW OF THE GRAPEVINE.**

*Agr Gaz New S Wales* 78(PT 11):BACK COVER

Nov 1967 23 N472

Chemical control (plant diseases), Fungus diseases (plants), Oidium, Powdery mildew (grapes), Sulfur.

Symptoms and chemical control of powdery mildew of grapes are discussed.

**21900-68**

**TOMATO SPOTTED WILT (TOMATO SPOTTED WILT VIRUS).**

*Agr Gaz New S Wales* 78(PT 10):BACK PAGE

Oct 1967 23 N472

Chemical control (insects), Dimethoate, DDT, Insect vectors, Spotted wilt (tomatoes), Thrips tabaci, Virus diseases (plants).

**21901-68**

**RHIZOCTONIA STEM ROT.**

*Agr Gaz New S Wales* 78(PT 2):BACK COVER

Feb 1967 23 N472

Chemical control (plant diseases), Fungus diseases (plants), Pentachloronitrobenzene, Rhizoctonia, Soil sterilization, Stem rot.

**21902-68**

**INTERCEPTIONS IN PLANT QUARANTINE FOR THE YEAR ENDING 30TH JUNE, 1966.**

*Agr Gaz New S Wales* 78(PT 1):52-53

Jan 1967 23 N472

Catalogs, Fungus diseases (plants), Plant quarantine, Virus diseases (plants).

**21903-68**

**LOOSE SMUT OF WHEAT.**

*Agr Gaz New S Wales* 78(PT 4):BACK COVER

Apr 1967 23 N472

Air-borne plant diseases, Hot water treatment (plants), Seed-borne plant diseases, Smut (wheat), Ustilago nuda, Wheat.

Symptoms of wheat smut caused by Ustilago nuda and its control are discussed.

**21904-68**

**SCLEROTIUM STEM ROT.**

*Agr Gaz New S Wales* 78(PT 1):BACK COVER

Jan 1967 23 N472

Chemical control (plant diseases), Fungus diseases (plants), Pentachloronitrobenzene, Sclerotium rolfsii, Stem rot.

**21905-68**

**BACTERIAL CANKER OF TOMATO (CORYNEBACTERIUM MICHIGANENSE).**

*Agr Gaz New S Wales* 78(PT 8):BACK COVER

Aug 1967 23 N472

Bacterial canker, Chemical control (plant diseases), Corynebacterium michiganense, Crop losses, Tomatoes.

The symptoms of bacterial canker of tomatoes and measures for its control and prevention are discussed.

**21906-68**

**GENETIC STUDY OF THE RESISTANCE OF COFFEA SPP. TO LEAF RUST I. IDENTIFICATION AND BEHAVIOR OF FOUR FACTORS CONDITIONING DISEASE REACTION IN COFFEA ARABICA TO TWELVE PHYSIOLOGIC RACES OF HEMILEIA VASTATRIX.**

M Noronha-Wagner A J Bettencourt

*Can J Bot* 45(11):2021-2031 REF

Nov 1967 470 C16C

Coffee, Fungus diseases (plants), Genetics, Hemileia vastatrix, Leaf rust (coffee), Plant disease resistance, Plant physiology, Research.

**21907-68**

**FERTILIZER-FUNGICIDE COMBINATIONS FOR THE CONTROL OF PYTHIUM DAMPING-OFF OF TOBACCO.**

F P Obrero T T Reyes A N Pordesimo

*Philippine Agr* 51(3):231-240 REF

Aug 1967 25 P542

Chemical control (plant diseases), Fertilizers, Fungicides, Pythium debaryanum, Seed treatment, Tobacco.

**21908-68**

**INVESTIGATIONS OF INHIBITING MECHANISMS IN VIRUS-INFECTED PLANTS. 3RD COMMUNICATION. PROBLEMS OF THE**

**MECHANICAL TRANSMISSION OF FRUIT VIRUS TO HERBACEOUS HOST. (GE)**

H Opel H Kegler  
*Phytopathol Z* 63(1):75-95 REF  
Sep 1968 464.8 P562

Fruit, Leaves, Plant disease transmission, Proteins, Research, Tables (data), Virus diseases (plants). English summary

21909-68

**VIRUS DISEASE SURVEY ON CITRUS IN AEGEAN REGION. (TU)**

M O Ozalp T Azeri  
*Bitki Koruma Bulteni* 7(4):167-187 REF  
1967 464.8 B542

Citrus, Host indexing (plants), Insect pests, Insect vectors, Plant disease transmission, Research, Surveys, Tables (data), Tree diseases, Virus diseases (plants). English summary

21910-68

**DISTRIBUTION OF LOOSE SMUT OF WHEAT (USTILAGO TRITICI (PERS) IN THE YEAR OF 1965 IN TURKEY.**

M Ozkan A Esen  
*Bitki Koruma Bulteni* 6(3):77-93  
1966 464.8 B542

Plant diseases, Plant injuries, Seedlings, Smut (wheat), Ustilago tritici, Wheat.

21911-68

**CONTROL OF RICE BLAST THROUGH FORECASTS AND FUNGICIDES.**

S 4 Padmanabhan  
*Indian Farming* 16(3):7-8  
Jun 1966 22 IN283  
Blast (rice), Fungicides, Rice.

21912-68

**SIX POWDERY MILDEWS FROM JAMMU AND KASHMIR STATE.**

V R Pandotra J L Kachroo K S M Sastry  
*Indian Acad Sci Proc Sect B* 67(3):119-124  
Mar 1968 513 IN250B  
Fungus diseases (plants), Mycology, Plants, Powdery mildew (plants).

21913-68

**SURVIVAL OF ROOT-INFECTING FUNGI IN SOIL. II. INFLUENCE OF AMENDMENT AND SOIL CARBON-TO-NITROGEN BALANCE ON FUSARIUM ROOT ROT OF BEANS.**

G C Papavizas J A Lewis P B Adams  
*Phytopathology* 58(3):365-372 REF  
Mar 1968 464.8 P56  
Beans, Carbon, Fungus diseases (plants), Fusarium solani phaseoli, Nitrogen compounds, Root rot, Soil amendments, Soil fungi.

21914-68

**THE AUTOECIOUS SPECIES OF PUCCINIA ON HELIANTHEAE IN NORTH AMERICA.**

J A Parmelee  
*Can J Bot* 45(12):2267-2327 REF  
Dec 1967 470 C16C  
Fungus diseases (plants), Helianthaceae, Puccinia, Uredinales.

21915-68

**SYSTEMATIC BREEDING PROGRAMME TO COMBINE RESISTANCE TO PHYTOPHTHORA AND THE QUALITY OF THE POTATO VARIETY BINTJE.**

J A J Poos  
*Euphytica* 16(2):167-170  
Sep 1967 450 EU6  
Fungus diseases (plants), Phytophthora, Plant breeding, Plant disease resistance, Potatoes.

21916-68

**ALTERATIONS IN THE PEACH TREES (CV. RED HAVEN) ATTACKED BY TAPHRINA DEFORMANS WITH PARTICULAR REFERENCE TO THE NITROGEN METABOLISM IN INFECTED AND NON-INFECTED LEAVES.**

V Raggi  
*Can J Bot* 45(4):459-477 REF

Apr 1967 470 C16C

Leaves, Metabolism, Nitrogen, Peaches, Plant diseases, Plant physiology, Taphrina deformans, Trees.

21917-68

**RESEARCH ON THE NATURAL DIFFUSION OF SOIL-BORNE GRAPE VIRUS DISEASES IN THE ITALIAN ENVIRONMENT. (IT)**

E Refatti A Amici E Bettio G Belli F Librini  
*Riv Patol Veg (SER 4)3(1 JAN-MAR):35-45*  
1967 464.8 R52  
Environment, Grapes, Research, Soils, Virus diseases (plants). English summary

21918-68

**RADIAL MOSAIC VIRUS OF GRAPEVINES. (IT)**

E Refatti  
*Riv Patol Veg (SER 4)3(1 JAN-MAR):23-34 REF*  
1967 464.8 R52  
Grapes, Host indexing (plants), Necrosis, Virus diseases (plants), Xiphinema index. English summary

21919-68

**ERRATUM: REACTIONS OF LODGEPOLE PINE TO ATTACK BY DENDROCTONUS PONDEROSAE HOPKINS AND BLUE STAIN FUNGI.**

R W Reid H S Whitney J A Watson  
*Can J Bot* 46(4):523  
Apr 1968 470 C16C  
Blue stain (pinus sylvestris), Dendroctonus ponderosae, Fungus diseases (plants), Pinus, Plant disease resistance.

21920-68

**PENETRANCE OF GENE I FOR FUSARIUM RESISTANCE IN THE TOMATO.**

N Retig N Kedar J Katan  
*Euphytica* 16(2):252-257  
Sep 1967 450 EU6  
Fungus diseases (plants), Fusarium, Genetics, Plant disease resistance, Tomatoes.

21921-68

**LETTUCE TIPBURN AND NITROGEN METABOLISM. (ABSTRACT).**

S K Ries L Baker S Ashkar  
*Hortscience* 3(2,SUMMER):124  
1968 SB1.H6  
Greenhouses, Lettuce, Metabolism, Nitrogen, Research, Tipburn (lettuce).

21922-68

**FUNGICIDES CAN CHECK BLACK BAND OF JUTE.**

A K Roy M K Shome  
*Indian Farming* 16(3):16  
Jun 1966 22 IN283  
Captan, Diplodia, Fungicides, Fungus diseases (plants), Jute.

21923-68

**THE INHERITANCE AND NATURE OF ALBINISM, INVOLUCRE SHAPE, AND CHLOROPHYLL DEFICIENCY IN LETTUCE. (ABSTRACT).**

E J Ryder  
*Hortscience* 3(2,SUMMER):95  
1968 SB1.H6  
Albinism, Chlorophylls, Color, Lettuce, Morphology, Plant nutritional deficiencies, Research.

21924-68

**THE 'NATA DE COCO'. I. CHARACTERIZATION AND IDENTITY OF THE CAUSAL ORGANISM.**

L A Saturnino-Dimaguila  
*Philippine Agr* 51(6):462-474 REF  
Nov 1967 25 P542  
Acetobacter, Bacteriology, Coconuts.

21925-68

**INVESTIGATIONS CONCERNING THE SEROLOGICAL PROOF OF THE NECROTIC RINGSPOT VIRUS OF THE SOUR CHERRY. III. THE SEROLOGICAL VARIABILITY OF THE NECROTIC RINGSPOT VIRUS OF THE SOUR CHERRY. (GE)**

C Schade

*Phytopathol Z* 62(4):334-342 REF  
Aug 1968 464.8 P562  
Cherries, Necrotic ring spot (cherries), Prunus, Research, Serological tests, Virus diseases (plants). English summary.

21926-68

**AFLATOXINS: PRODUCTION OF THE TOXINS IN VITRO IN RELATION TO TEMPERATURE.**

H W Schroeder H Hein Jr.  
*Appl Microbiol* 15(2):441-445  
Mar 1967 448.3 AP5  
Aflatoxin, Aspergillus flavus, Cottonseed, Culture media, Fungus diseases (plants), Peanuts, Rice, Temperature.

21927-68

**THE DYNAMICS OF VIRUS-INDUCED CHANGES IN THE RELEASE OF SUBSTANCES FROM LEAVES AND SPROUTS. (GE)**

G Schuster  
*Phytopathol Z* 62(4):351-364  
Aug 1968 464.8 P562  
Leaves, Plant disease control, Plant physiology, Research, Tables (data), Virus diseases (plants). English summary

21928-68

**SEROLOGICAL BEHAVIOR OF CUCUMBER MOSAIC VIRUS (STRAIN Y) AND THE VIRUS PROTEIN.**

H A Scott  
*Virology* 34(1):79-90 REF  
Jan 1968 448.8 V81  
Cucumbers, Mosaic (cucumbers), Serological tests, Virus diseases (plants).

21929-68

**PETIOLE DISEASE OF COCONUT IN PAPUA.**

D E Shaw C Booth  
*Papua New Guinea Agr J* 19(2):89-93  
Sep 1967 23 N453  
Coconuts, Fungicides, Fungus diseases (plants).

21930-68

**EFFECT OF GROWTH-REGULATORS ON TRANSLOCATION AND DISTRIBUTION OF AMINO ACIDS, ORGANIC ACIDS, AND SUGARS IN MUSCAT OF ALEXANDRIA GRAPES. (ABSTRACT).**

W W Shindy W M Kliever R J Weaver  
*Hortscience* 3(2,SUMMER):113  
1968 SB1.H6  
Amino acids, Chemicals, Grapes, Organic compounds, Plant physiology, Plant regulators, Plant translocation, Research, Sugars.

21931-68

**MAGNESIUM NUTRITION OF APPLE TREES AS AFFECTED BY A WIDE RANGE OF FERTILIZER MATERIALS. (ABSTRACT).**

C B Smith  
*Hortscience* 3(2,SUMMER):106  
1968 SB1.H6  
Apples, Deficiency diseases, Fertilizers, Leaves, Magnesium, Research, Trees.

21932-68

**MORPHOLOGY AND PATHOGENICITY OF SINGLE-SPORE ISOLATES OF ALTERNARIA LONGIPES. (ABSTRACT).**

E K Sohrs  
*Phytopathology* 58(6):731  
Jun 1968 464.8 P56  
Alternaria longipes, Brown spot, Fungus diseases (plants), Plant morphology, Spores, Tobacco.

21933-68

**CAN TAICHUNG NATIVE-I STAND UP TO BACTERIAL BLIGHT.**

D N Srivastava V P Rao J C Durgapal  
*Indian Farming* 16(2):15  
May 1966 22 IN283  
Bacterial diseases (plants), Crop losses, Plant disease resistance, Rice.

21934-68

**NEW APPROACHES IN DISEASE CONTROL.**



- D N Srivastava  
*Indian Farming* 16(6):38-39,149  
Sep 1966 22 IN283  
Bacterial diseases (plants), Chemical control (plant diseases), Cultural control (plant diseases), Rice.  
The epidemiology and control of bacterial blight and other rice diseases are given.
- 21935-68**  
**BIOLOGICAL CHARACTERISTICS OF FOMES FOMENTARIUS FOUND ON SPRUCE AND BIRCH.**  
P A Suvorov  
*Can J Bot*  
Oct 1967 470 C16C  
Betula, Biology, Fomes fomentarius, Fungus diseases (plants), Picea, Properties.
- 21936-68**  
**VITAVAX- A NEW SYSTEMIC FUNGICIDE. (GE)**  
H D Tate B V Schmeling  
*Pflanzenschutzberichte* 37(12):193-196  
Jun 1968 464.9 P48  
Biochemistry, Chemical control (plant diseases), Dihydro-5-carboxanilido-6-methyl-1,4-oxathin,2,3-, Fungicides, Fungus diseases (plants), Rhizoctonia solani, Tilletia caries, Tilletia controversa, Ustilago hordei, Ustilago nuda. English summary given at 6th International Congress for Plant Protection vienna, 1967.
- 21937-68**  
**PURIFICATION AND PROPERTIES OF BROAD BEAN WILT VIRUS.**  
R H Taylor P R Smith C Reinganum A J Gibbs  
*Australian J Biol Sci* 21(5):929-935 REF  
Oct 1968 442.8 AU72  
Broadbeans, Serological tests, Virus diseases (plants), Wilt (broadbeans).
- 21938-68**  
**NOTES ON THE SMUT GENERA ENTORRHIZA AND SCHROETERIA.**  
M J Thirumalachar M D Whitehead  
*Amer J Bot* 55(2):183-186 REF  
Feb 1968 450 AM36  
Catalogs, Taxonomy, Ustilaginales.
- 21939-68**  
**A STUDY ON THE EPIDEMIOLOGY OF STRIPE RUST, PUCCINIA STRIIFORMIS WEST., IN CALIFORNIA.**  
H Tollenaar B R Houston  
*Can J Bot* 45(3):291-307 MAP REF  
Mar 1967 470 C16C  
Epidemiology, Fungus diseases (plants), Puccinia striiformis, Research, Stripe rust (wheat), Wheat.
- 21940-68**  
**THE USE OF DENSITY GRADIENT CENTRIFUGATION IN A ZONAL CENTRIFUGE ROTOR DURING THE PURIFICATION OF A PEAR VIRUS.**  
J A Tomlinson S H Smith  
*J Gen Virol* 3(PT 1):153-156  
Jul 1968 Q0R360.0A10J6  
Centrifugation, Density, Pears, Research, Tables (data), Virus diseases (plants).
- 21941-68**  
**THE INFLUENCE OF INDUCED SOIL MOISTURE STRESS UPON FOMES ANNOSUS ROOT ROT OF LOBLOLLY PINE.**  
B Towers W J Stambaugh  
*Phytopathology* 58(3):269-272 REF  
Mar 1968 464.8 P56  
Fomes annosus, Fungus diseases (plants), Greenhouse culture, Pinus taeda, Root rot, Soil moisture, Temperature.
- 21942-68**  
**EFFECT OF MAIZE DWARF MOSAIC VIRUS INFECTION ON RESPIRATION AND PHOTOSYNTHESIS OF CORN.**  
J C Tu R E Ford  
*Phytopathology* 58(3):282-284 REF  
Mar 1968 464.8 P56  
Corn, Dwarf disease, Mosaic, Photosynthesis, Respiration, Virus diseases (plants).
- 21943-68**  
**COMPARISONS OF CHLOROPLASTS AND PHOTOSYNTHETIC RATES OF PLANTS INFECTED AND NOT INFECTED BY MAIZE DWARF MOSAIC VIRUS.**  
J C Tu R E Ford C J Krass  
*Phytopathology* 58(3):285-288 REF  
Mar 1968 464.8 P56  
Chloroplasts, Corn, Dwarf disease, Mosaic, Photosynthesis, Sorghum, Virus diseases (plants).
- 21944-68**  
**CONTRIBUTION TO THE PHYSIOLOGICAL STUDY ON THE EFFECT OF THE SUBSTANCE ISOLATED FROM CONIDIA OF THE FUNGUS ERYSPHE GRAMINIS F. SP. HORDEI MARCHAL.**  
G Vizárová A Janitor  
*Phytopathol Z* 62(4):311-318 REF  
Aug 1968 464.8 P562  
Erysiphe graminis, Fungus diseases (plants), Indoleacetic acid, Oats, Plant physiology, Research, Seed germination. German summary
- 21945-68**  
**SEROLOGICAL STUDIES ON BROMEGRASS MOSAIC VIRUS AND ITS PROTEIN FRAGMENTS.**  
M B Von Wechmar M H V Van Regenmortel  
*Virology* 34(1):36-45 REF  
Jan 1968 448.8 V81  
Bromus, Mosaic (bromus), Proteins, Serological tests, Virus diseases (plants).
- 21946-68**  
**NEW RECORDS OF PLANT DISEASES IN NEW SOUTH WALES.**  
J Walker  
*Agr Gaz New S Wales* 78(PT 1):47-51 MAP  
Jan 1967 23 N472  
Bacterial diseases (plants), Catalogs, Fungus diseases (plants), Plant diseases, Plant nematodes, Zoogeography.
- 21947-68**  
**ISOLATION, INCIDENCE, AND VIRULENCE OF ASCOCHYTA SPP. OF PEAS FROM THE SOIL.**  
V R Wallen S I Wong J Jeun  
*Can J Bot* 45(12):2243-2247 REF  
Dec 1967 470 C16C  
Ascochyta, Fungus diseases (plants), Peas, Soils.
- 21948-68**  
**FINE STRUCTURE OF INCLUSIONS FORMED BY THE AUCUBA STRAIN OF TOBACCO MOSAIC VIRUS.**  
H E Warmke  
*Virology* 34(1):149-159 REF  
Jan 1968 448.8 V81  
Aucuba mosaic (tobacco), Inclusion bodies, Physiology, Tobacco, Virus diseases (plants).
- 21949-68**  
**SOME SEASONAL ASPECTS OF THE GROWTH OF TUMORS ON THE WHITE SPRUCE, PICEA GLAUCA.**  
P R White G Tsoumis F Hyland  
*Can J Bot* 45(11):2229-2232  
Nov 1967 470 C16C  
Picea glauca, Plant diseases, Plant galls, Plant physiology, Seasons.
- 21950-68**  
**COMPARATIVE SUSCEPTIBILITY OF LARGE AND SMALL SPRUCE ROOTS TO POLYPORUS TOMENTOSUS.**  
R D Whitney  
*Can J Bot* 45(11):2227-2229  
Nov 1967 470 C16C  
Fungus diseases (plants), Picea, Plant disease resistance, Polyporus tomentosus, Roots.
- 21951-68**  
**SOME EFFECTS OF A GROWTH RETARDANT ON SHOOT MERISTEMS OF APPLE. (ABSTRACT).**  
M Wilde L J Edgerton  
*Hortscience* 3(2,SUMMER):125  
1968 SB1.H6  
Abnormalities, Apples, Dimethyl amino succinamic acid, N-, Histology, Plant regulators, Research, Seedlings, Spraying.
- 21952-68**  
**DETERIORATION OF TREATED AND UNTREATED COTTONSEED DURING HUMID STORAGE.**  
A B Wiles  
*Phytopathology* 58(3):289-293  
Mar 1968 464.8 P56  
Bacterial diseases (plants), Cottonseed, Fungicides, Fungus diseases (plants), Humidity, Mercury compounds, Seed germination, Storage.  
Abstract: Used surface sterilization with alcoholic mercuric chloride, and surface treatment with organic mercury fungicide.
- 21953-68**  
**EFFECT OF CYTOKININS ON APPLE SHOOT DEVELOPMENT FROM AXILLARY BUDS.**  
M W Williams E A Stahly  
*Hortscience* 3(2,SUMMER):68-69  
1968 SB1.H6  
Apples, Chemicals, Mitosis, Morphology, Plant hormones, Research, Trees.
- 21954-68**  
**FINE STRUCTURE OF PLASMODIOPHORA BRASSICAE IN SPOROGENESIS.**  
P H Williams S S McNabola  
*Can J Bot* 45(9):1665-1669 REF  
Sep 1967 470 C16C  
Anatomy, Cells, Fungus diseases (plants), Plant physiology, Plasmodiophora brassicae.
- 21955-68**  
**THE EFFECT OF SCAB RESISTANCE ON FRUIT LENGTH IN SLICING CUCUMBERS. (ABSTRACT).**  
J N Wilson H M Munger  
*Hortscience* 3(2,SUMMER):107-110  
1968 SB1.H6  
Cucumbers, Physiology, Plant diseases, Research, Scab (cucumbers).
- 21956-68**  
**MICRONUTRIENT EFFECTS ON THE IN VITRO GROWTH AND PATHOGENICITY OF FUSARIUM OXYSPORUM F. SP. LYCOPERSICI.**  
S S Woltz J P Jones  
*Phytopathology* 58(3):336-338  
Mar 1968 464.8 P56  
Boron, Copper, Culture media, Fungus diseases (plants), Fusarium oxysporum lycopersici, Iron, Manganese, Micronutrients, Molybdenum, Plant nutritional deficiencies, Plant physiology, Tomatoes, Wilt, Zinc.
- 21957-68**  
**SELECTIVE RETENTION OF UREDOSPORES BY LEAVES.**  
C E Yarwood  
*Phytopathology* 58(3):359-361 REF  
Mar 1968 464.8 P56  
Beans, Fungus diseases (plants), Leaves, Rust, Spore germination, Water.

## ARTHROPODS

- 21958-68**  
**VIRUS DISEASES OF THE ROSE. (GE)**  
F Afscharpour H Faber  
*Gesunde Pflanzen* 19(11):226.228-231 REF  
Nov 1967 464.8 G33

21959-68

Insect control, Insect vectors, Nematodes, Plant quarantine, Rosa, Therapeutics, Virus diseases (plants), Water. Viruses noted were: rose mosaic, rose yellow mosaic, rose streak virus, rose wilt, rose die-back, rose virus 1,2, and 3, apple mosaic, peach mosaic, rose cowl, and rose mottling.

21959-68

## CONTROL OF BACHACS.

*Agr Soc Trinidad Tobago J* 67(1):13-15

Mar 1967 8 T73

Agricultural legislation, Atta, Pest control, Plant protection.

21960-68

## CONTROL OF THE BANANA WEEVIL.

*Agr Soc Trinidad Tobago J* 68(1):23-24

Mar 1968 8 T73

Bananas, Chemical control (insects), Cosmopolites sordidus, Dieldrin, Plant injuries.

21961-68

## EFFECTS OF PHENOLS ON THE PLANT.

S Amer E M Ali

*Beit Biol Pflanz* 44:59-65

1968 450 C66

Crops, Insect control, Insect pests, Phenols, Research, Seed germination, Seed treatment.

21962-68

## HELIOTHIS SPECIES LEPIDOPTERA: NOCTUIDAE IN PAPUA AND NEW GUINEA.

J H Barrett

*Papua New Guinea Agr J* 19(2):61-66 REF

Sep 1967 23 N453

Catalogs, Chemical control (insects), Heliothis, Insect taxonomy.

21963-68

## SEVERAL OBSERVATIONS ON THE NATURE OF THE SPRING DEVELOPMENT OF CHERMES TARDUS DREYF. (FR)

R Baurant

*Gembloux Inst Agron Etat Bull* 3(2):226-233

1968 105.1 G285

Adelges, Aphididae, Chemical control (insects), Insect biology. English, German and Afrikaans abstract

The activities of the Fundatrix-stage of the spruce gall aphid, *Chermes tardus* were observed prior to the budbreak of its host-plant. Chemical sprays were found effective when used before March 9 in the 1967 study.

21964-68

## BANANA BEETLE BORER CONTROL INVESTIGATIONS ON THE NORTH COAST OF NEW SOUTH WALES.

B M Braithwaite

*Agr Gaz New S Wales* 78(PT 6):359-365

Jun 1967 23 N472

Aldrin, Bananas, Chemical control (insects), Cosmopolites sordidus, Dieldrin, Heptachlor.

21965-68

## TRANSMISSION OF TRANSITORY YELLOWING VIRUS OF RICE BY TWO LEAFHOPPERS.

R Chiu J Jean M Chen T Lo

*Phytopathology* 58(6):740-745 REF

Jun 1968 464.8 P56

Insect vectors, Planthoppers, Plant disease transmission, Rice, Virus diseases (plants).

21966-68

## A CONTRIBUTION TO THE FRUIT FLY RESISTANCE IN CERTAIN LINES OF CORN AND HYBRIDS. (GE)

B Dolinka

*Pflanzenschutzberichte* 38(8/9):115-122 REF

Jul 1968 464.9 P48

Breeding, Corn, Crop losses, Insect pests, Oscinella frit, Plant injuries, Research. English summary

21967-68

## CACAO FLUSH DEFOLIATING CATERPILARS IN PAPUA AND NEW GUINEA.

G S Dun

*Papua New Guinea Agr J* 19(2):67-71

Sep 1967 23 N453

Cacao, Catalogs, Caterpillars, Insect pests.

21968-68

## OBSERVATIONS ON PENETRATION OF LINDEN BRANCHES BY STYLETS OF THE APHID LONGISTIGMA CARYAE.

R F Evert W Eschrich J T Medler F J Alfieri

*Amer J Bot* 55(7):860-874 REF

Aug 1968 450 AM36

Aphididae, Food habits, Plant physiology, Saliva, Stylets, Tilia americana.

21969-68

## SOME OBSERVATIONS ON EGG DIAPAUSE IN THE TRINIDAD SUGAR CANE FROGHOPPER, AENEOLAMIA VARIA SACCHARINA (HOMOPTERA, CERCOPIDAE).

D W Fewkes

*Entomol Mon Mag (SER. A)* 99(287-8):224-228

Nov 1963 421 EN86

Aeneolamia varia saccharina, Crop yields, Environment, Histology, Insect morphology, Reproduction, Research, Sugarcane.

21970-68

## SOME FACTORS INFLUENCING CONTROL OF THE TWO-SPOTTED SPIDER MITE TETRANYCHUS URTICAE KOCH (ACARINA: TETRANYCHIDAE), ON GREENHOUSE CUCUMBERS.

W H Foott

*Entomol Soc Ontario Proc* 95:108-115

1964 420 ON8

Acaricides, Cucumbers, Greenhouses, Insect control, Research, Spraying, Tetranychus urticae.

21971-68

## INSECTICIDE TREATMENT OF WATER LILY PONDS TO STOP CADDIS FLY DAMAGE.

J G Gellatley

*Agr Gaz New S Wales* 78(PT 7):421-422

Jul 1967 23 N472

Aquatic plants, Chemical control (insects), Dimethoate, Trichoptera.

21972-68

## MITES OF CAMELLIA.

F A Gibson

*Agr Gaz New S Wales* 78(PT 11):663-664

Nov 1967 23 N472

Camellia, Chemical control (insects), Mites, Sulfur compounds.

Chemical control of three camellia mites in Australia with lime sulfur is discussed.

21973-68

## THE SITONA WEEVIL--A PEST OF LUCERNE (SITONA HUMERALIS).

L R Greenup

*Agr Gaz New S Wales* 78(PT 9):528-529

Sep 1967 23 N472

Alfalfa, Azinphosethyl, Chemical control (insects), DDT, Insect behavior, Sitona.

The life cycle, occurrence, dispersal, and chemical control of the Sitona weevil of alfalfa in Australia is discussed.

21974-68

## CICADAS AS PESTS IN NEW SOUTH WALES.

L R Greenup

*Agr Gaz New S Wales* 78(PT 1):42-46

Jan 1967 23 N472

Cicadidae, Grapes, Plant injuries.

21975-68

## THE BLUE OAT MITE PENTHALEUS MAJOR (DUGES) (ACARINA: EUPODIDAE).

L R Greenup

*Agr Gaz New S Wales* 78(PT 7):410-411

Jul 1967 23 N472

Chemical control (insects), DDT, Grain, Grasses, Penthaeus major.

Chemical control of the blue oat mite, Penthaeus major, a grain and pasture crop pest in Australia is discussed.

21976-68

## RESULTS OF EFFICIENCY STUDIES ON CARBARYL IN GRANULAR FORM AT 5 PER CENT AND 7.5 PER CENT OF THE ACTIVE INGREDIENT FOR THE CONTROL OF PYRALIDS OF CORN. (FR)

D Hadzistevic

*Rev Zool Agr Appl* 66(4-6, 2ND TRIMESTER):44-48

1967 410.9 SO12

Carbaryl, Chemical control (insects), Corn, Insecticides, Ostrinia nubilalis, Pyralidae.

Details of the life history of the codling plum moth were confirmed experimentally throughout 1966.

21977-68

## PESTS.

P. Israel

*Indian Farming* 16(6):26,120-121

Sep 1966 22 IN283

Chemical control (insects), Cultural control (insects), Rice.

Chemical and agronomic controls of insect pests of rice in India are discussed

21978-68

## CUTTING DOWN CANE LOSSES FROM TERMITES AND SHOOT BORER.

A N Kalra

*Indian Farming* 16(8):28-29

Nov 1966 22 IN283

Chlordane, Diatraea saccharalis, Dusting, Heptachlor, Insect control, Insecticides, Sugarcane, Telodrin, Termites.

21979-68

## COLEOPTERA ATTACKING TREE AND SHRUB PLANTINGS IN THE CITY OF KHARKOV.

Yu P Maksimova

*Entomol Rev* 46(4,OCT-DEC):471-474

Dec 1967 421 R322AE

Catalogs, Coleoptera, Predaceous insects, Shrubs, Trees, Zoogeography. Russian journal pp. 799-804

21980-68

## CHENOPODIUM TEST FOR THE DEMONSTRATION OF THE PRESENCE OF THE LETTUCE MOSAIC VIRUS IN SEEDS. (GE)

J Marrou

*Umschau* 68(6):185

14 Mar 1968 474 UM7

Aphididae, Chenopodium, Methodology, Mosaic (lettuce), Research, Seeds, Virus diseases (plants).

21981-68

## THE USE OF ATTRACTANTS IN PEST CONTROL. (GE)

K Mayer

*Gesunde Pflanzen* 20(6):120,122,124-126 REF

Jun 1968 464.8 G33

Ammonia, Attractants, Biochemistry, Chemical control (insects), Citrus, Geraniol, Insect eggs, Insect repellents, Oils, Pest control, Pheromones, Population, Sex attractants, Social insects.

21982-68

## STUDIES ON BIOLOGY OF BANMALIKA LEAF MINOR (AGROPISTIS LIMATUS, MOTH., COLEOPTERA, HALTICIDAE.) A SERIOUS PEST OF BANMALIKA (JASMINUM AQUESTIFOLIUM, VOHL.) IN RAJASTHAN.

V P Mital

*Agra Univ J Res Sci* 16(PT 1):89-91

Jan 1967 513 AG8

Chrysomelidae, Jasminum, Leaf miners, Life cycle.

21983-68

## CUTWORMS AND ARMYWORMS.

*Agr Gaz New S Wales* 78(PT 4):230-233

Apr 1967 23 N472

Carbaryl, Chemical control (insects), Cultural control (insects), DDT, Natural control (insects), Noctuidae, Trichlorfon.

Prevention and chemical and cultural controls for



army and cutworms in Australian crops are discussed.

#### 21984-68 THE PEAR AND CHERRY SLUG.

*Agr Gaz New S Wales* 78(PT 3):182-183

Mar 1967 23 N472

Caliroa cerasi, Chemical control (insects), Cherries, Lead arsenate, Malathion, Mevinphos, Pears.

Chemical control of Caliroa cerasi larvae, a pear and cherry leaf pest is discussed.

#### 21985-68 ON THE TWO MEGASTIGMUS SPECIES (HYM., TORYMIDAE) OF THE JUNIPER SEED (JUNIPERUS COMMUNIS L.). (GE )

M Nuorteva

*Suomen Hyonteistieteellinen Aikakauskirj Ann*

*Entomol Fenn* 33(2):121-124 REF

30 Aug 1967 421 SU7

Hymenoptera, Juniperus, Seeds.

#### 21986-68

SEASONAL AND ZONAL DISTRIBUTION OF ICHNEUMONIDAE (HYM.) ON A SUBARCTIC FELL DURING A CALAMITY OF THE GEOMETRID MOTH OPORINIA AUTUMNATA (BKH.) ON BIRCHES.

P Nuorteva R Jussila

*Suomen Hyonteistieteellinen Aikakauskirj Ann*

*Entomol Fenn* 33(3):155-163 REF

02 Nov 1967 421 SU7

Betula, Geometridae, Ichneumonidae, Seasonal variation, Zoogeography.

#### 21987-68

CARABIDAE AND STAPHYLINIDAE OCCURRING ON SOIL SURFACE IN LUCERNE FIELDS. R Obrtl

*Acta Ent Bohemoslov* 1(65):5-20 REF

1968 420 C33

Alfalfa, Carabidae, Epidemiology, Field crops, Insect outbreaks, Insect pests, Precipitation, Soil horizons, Staphylinidae, Temperature.

#### 21988-68

HONEY BEES AS POLLINATORS OF RED CLOVER.

T Palmer-Jones

*New Zeal J Agr* 114(1):34-35

Jan 1967 23 N48J

Apis mellifera, Clover, Pollination.

#### 21989-68

NEW METHODS OF PEST CONTROL.

M D Pathak

*Indian Farming* 16(6):37,128-131,156

Sep 1966 22 IN283

Biological control (insects), Chemical control (insects), Insecticides, Integrated control (insects), Lindane, Methyl parathion, Rice.

Chemical, biological and integrated control of insect pests of rice in the Philippines are presented.

#### 21990-68

ON THE USE OF ENTOMOPATHOGENIC BACTERIA TOGETHER WITH INSECTICIDES IN THE CONTROL OF INSECT PESTS.

V P Pristavko

*Entomol Rev* 46(4,OCT-DEC):443-446 REF

Dec 1967 421 R322AE

Bacteria, Entomogenous fungi, Insecticides, Integrated control (insects), Leptinotarsa decemlineata. Russian journal pp. 753-759

#### 21991-68

DD-136 NEMATODE THAT CAN KILL MANY INSECT PESTS.

V P Rao T M Manjunath

*Indian Farming* 16(2):43-44

May 1966 22 IN283

Bacteria, Biological control (insects), Insect control, Nematodes.

The life cycle, and potential use of a nematode, DD-136, for control of various crop pests is discussed. A partial host list is included.

#### 21992-68

CHANGES IN THE YIELD AND PROTEIN QUANTITY OF OAT CAUSED BY RHOPALOSIPHUM PADI (L.) (HOM., APHIDIDAE).

J Rautapaa

*Ann Agr Fenn* 7(2):95-104 REF

1968 20 AN7

Crop yields, Oats, Proteins, Rhopalosiphum padi.

#### 21993-68

TESTS FOR INHERITANCE OF DIELDRIN-RESISTANCE IN THE CABBAGE MAGGOT, HYLEMYA BRASSICAE (BOUCHE).

D C Read

*Entomol Soc Ontario Proc* 95:128-132

1964 420 ON8

Cabbage, Dieltrin, Equipment, Genetics, Hylemya brassicae, Insect rearing, Research.

#### 21994-68

INSECTICIDES, FUNGICIDES AND ANTIBIOTICS.

S Singh

*Indian Farming* 16(6):51,53,151

Sep 1966 22 IN283

Antibiotics, Chemical control (pests), Chemical control (weeds), Fungicides, Insecticides, Rice.

A discussion of equipment and chemical agents used for the control of rice pests in India is given.

#### 21995-68

THE WESTWARD MOVEMENT OF PINK BOLLWORM.

J F Spears

*Entomol Soc Amer Bull* 14(2):118-119

Jun 1968 423.9 EN8

Cotton, Insect biology, Insect control, Insect migration, Insect pests, Pectinophora gossypiella, Plant injuries, Population.

#### 21996-68

REACTION OF TOMATO VARIETIES AND BREEDING LINES TO APHIDS.

A K Stoner R E Webb A G Gentile

*Hortscience* 3(2,SUMMER):77

1968 SB1.H6

Breeding, Macrosiphum euphorbiae, Research, Tomatoes, Weather.

#### 21997-68

SELECTING TOMATOES FOR RESISTANCE TO SPIDER MITES.

A K Stoner

*Hortscience* 3(2,SUMMER):110

1968 SB1.H6

Insect identification, Leaves, Plant injuries, Research, Tetranychus cinnabarinus, Tomatoes.

#### 21998-68

STUDY OF AN ITONIDID (CONTARINIA MEDICAGINIS KIEFFER) AND OF ITS HOST. (FR )

M G Strebler

*Paris Acad Agr France Compt Rend Seances Hebd*

54(8):584-586

15 May 1968 14 P215BC

Contarinia, Corn, Crop losses, Life cycle.

#### 21999-68

RESEARCH ON THE CHEMICAL CONTROL OF ACERIA SHELTONI. (TU )

C Tokmakoglu O Z Soyul M Y Celik

*Bitki Koruma Bulteni* 7(4):155-166

1967 464.8 B542

Acaricides, Aceria sheldoni, Biochemistry, Chemical control (insects), Chemicals, Citrus, Insect migration, Insect pests, Population, Research, Spraying, English summaries. Chemicals used were: chlorobenzilate, chloropropylate and etradex.

#### 22000-68

WAR ON LOCUSTS GOES ON.

M Woodstock

*Indian Farming* 16(2):20

May 1966 22 IN283

Acerididae, Insect control.

A brief description of the British Ministry of Overseas Development's activity concerning the control of locusts is presented.

#### 22001-68

SUSCEPTIBILITY TO INSECTICIDES OF THE GREEN RICE LEAFHOPPER, NEPHOTETTIX CINCTICEPS UHLER, COLLECTED FROM VARIOUS LOCALITIES. (JA )

K Yoshioka T Iwata

*Jap J Appl Entomol Zool* 11(4):193-195

Dec 1967 475 J27

Chemical control (insects), Geography, Insecticides, Nephotettix cincticeps, Research, Rice.

## NEMATODES

#### 22002-68

TRANSMISSION AND MORPHOLOGICAL STUDIES OF DISEASED H VICTORIAE.

B Anastasiadis

*Diss Abstr Sect B* 29(5):1540B

Nov 1968 Z5055.U49D53

Culture media, Fungi, Helminthosporium victoriae, Morphology, Nematodes, Research.

#### 22003-68

PROBLEMS OF NEMATODE CONTROL IN BAVARIAN POTATO CULTURES. (GE )

P Behringer

*Gesunde Pflanzen* 20(10):227,228,230-231

Oct 1968 464.8 G33

Biochemistry, Chemical control (nematodes), Crop rotation, Nematodes, Plant nematode resistance, Potatoes, Research, Soils.

#### 22004-68

EFFICACY OF VORLEX ON MITES AND NEMATODES ON GLADIOLUS CORM DEBRIS IN SANDY SOILS OF FLORIDA. (ABSTRACT).

A W Engelhard A J Overman

*Phytopathology* 58(6):727

Jun 1968 464.8 P56

Biochemistry, Chlorinated hydrocarbons, Gladiolus, Meloidogyne, Methyl isothiocyanate, Mites, Plant nematodes, Plant pest control, Sandy soils. Vorlex is a mixture of chlorinated hydrocarbons and methyl isothiocyanate.

#### 22005-68

CONCERNING THE DISTRIBUTION OF FREELY OCCURRING NEMATODES OF THE GENUS PRATYLENCHUS ON AGRICULTURALLY USED AREAS IN WESTPHALIA-LIPPE. (GE )

A Kemper

*Gesunde Pflanzen* 20(6):127-130

Jun 1968 464.8 G33

Crop rotation, Crops, Ditylenchus dipsaci, Fertilizers, Heterodera avenae, Nematodes, Pratylenchus, Soil hydrogen-ion concentration, Soil testing.

#### 22006-68

RED RING (RADINAPHELENCHUS COCOPHILUS) OF THE COCONUT TREE IN THE ZONE OF TUMACO (NARINO). (SP )

A Sanchez Potes

*Agr Trop* 23(7):433-449 REF

Jul 1967 26 AG8

Arsenites, Chemical control (insects), Chemical control (nematodes), Curculionidae, Endrin, Insect vectors, Plant disease transmission, Plant nematodes, Red ring (coconuts), Zoogeography.

#### 22007-68

PROBLEMS OF THE CONTROL OF THE CEREAL CYST NEMATODE (HETERODERA AVENAE) IN BAVARIA. (GE )

F Wagner P Behringer

*Gesunde Pflanzen* 20(10):231-233

Oct 1968 464.8 G33

Crop losses, Grain, *Heterodera avenae*, Nematodes, Pest control, Plant injuries, Plant nematode resistance, Plant protection, Zoogeography.

## WEEDS

22008-68

## SOME IMPORTANT WEEDS IN THE NORTHERN TERRITORY.

Anonymous

2P

0000 SB613.A8H3

Weeds.

22009-68

## CHEMICAL CONTROL OF WEEDS IN DRAINS.

G J Batten

*New Zeal J Agr* 114(4):26-29

Apr 1967 23 N48J

Aquatic weeds, Chemical control (weeds), Herbicides.

The chemical control of weeds in drains in New Zealand is discussed giving specific directions for control of blackberry, raupo, mercer, and purva grasses, rushes, water milfoil and reed sweetgrass.

22010-68

## FLURENOL- A HERBICIDE WITH NEW PROPERTIES. (GE)

J Berker

*Gesunde Pflanzen* 20(5):102,104-106

May 1968 464.8 G33

Biochemistry, Chemical control (weeds), Grain, Herbicides, Methyl-4-chlorophenoxyacetic acid, 2-Plant physiology, Roots, Soil adsorption.

22011-68

## EXPERIMENTAL RESULTS CONCERNING THE CHEMICAL CONTROL OF WEEDS IN YOUNG LUCERNE FIELDS. (RUM)

A Ciorlaus H Bredt M Enica M Guta D Halalau et. al.

*Probl Agr* 20(9):21-30

1968 21 R862

Alfalfa, Chemical control (weeds), Herbicides. English, Russian and French abstracts

22012-68

## TRIFLURALIN-TREATED CLOTH CONTROLS WEEDS IN GERANIUM PLANTINGS. (ABSTRACT).

L L Danielson

*Hortscience* 3(2,SUMMER):140-141

1968 SB1.H6

Chemical control (weeds), Equipment, Pelargonium hortorum, Planting, Research, Soils, Temperature, Trifluralin.

22013-68

## EXPERIMENTS WITH TORDON HERBICIDE IN SMALL GRAINS.

R L Gantz I E Warren

*Weed Soc Amer Abstr* 1966 MEETING:4

1966 241 W41

Barley, Chemical control (weeds), D, 2,4-, Grain, Herbicides, Picloram, Polygonum convolvulus, Spraying, Wheat.

22014-68

## CHANGED METHOD OF NATA USE IN THE CONTROL OF AGROPYRON REPENS ON ARABLE LAND. (GE)

F Herbold

*Gesunde Pflanzen* 19(11):236-238

Nov 1967 464.8 G33

Agropyron repens, Antitoxins, Biochemistry, Chemical control (weeds), Clay soils, Crop rotation, Methodology, Plant translocation, Tillage, Toxicology, Trichloroacetic acid.

22015-68

## EFFICACY OF A STALE SEEDBED APPROACH FOR PROVIDING WEED CONTROL IN PICKLING CUCUMBERS. (ABSTRACT).

F D Hess A R Putnam

*Hortscience* 3(2,SUMMER):98

1968 SB1.H6

Chemical control (weeds), Cucumbers, Herbicides, Research, Seedbeds.

22016-68

## THE FIELD THISTLE (CIRSIIUM ARVENSE SCOP.) IN THE GRASSLANDS. BIOLOGY AND MEANS OF CONTROL. (FR)

P Limbourg

*Gembloux Inst Agron Etat Bull* 3(2):331-340

REF

1968 105.1 G285

Chemical control (weeds), Cirsium arvense, Pastures, Picloram. French abstract

22017-68

## THE THREE R'S OF HERBICIDE USE.

M K Mathur

*Indian Farming* 16(2):18-19

May 1966 22 IN283

Herbicides, Time.

Mathematical calculations for the formulation of various liquid and dry herbicides along with a list of their active ingredients are given. The type, dosage and application times of herbicides for Indian crops are discussed.

22018-68

## WEEDICIDES IN SEDGE CONTROL TRIALS.

D M E Merry

*New Zeal J Agr* 114(4):44-45,47

Apr 1967 23 N48J

Carex, Chemical control (weeds), Herbicides, Weed control.

Herbicides for control of Australian sedge in New Zealand are discussed. Most effective chemicals and application methods are given.

22019-68

## CONTROLLING HAIRGRASS (DESCHAMPSIA CAESPITOSA). (GE)

J Meyer H P Hadenfelt

*Gesunde Pflanzen* 20(4):75-79

Apr 1968 464.8 G33

Biochemistry, Calcium, Chemical control (weeds), Deschampsia, Herbicides, Paraquat.

22020-68

## AUSTRALIAN SEDGE IN NEW ZEALAND.

B P J Molloy E Edgar

*New Zeal J Agr* 114(4):41-44

Apr 1967 23 N48J

Carex, Plant ecology, Plant quarantine, Weed control.

The identification and history of Australian sedge in New Zealand is discussed. Plant quarantine stations are analysing ecological studies to combat the weed.

22021-68

## CHEMICAL WEED CONTROL IN PICKLING CUCUMBERS. (ABSTRACT).

T J Monaco C H Miller

*Hortscience* 3(2,SUMMER):94

1968 SB1.H6

Chemical control (weeds), Cucumbers, Herbicides, Research, Weeds.

22022-68

## UP TO DATE WEED CONTROL IN HORTICULTURE.

H Neururer

*Pflanzenarzt* 21(4):51-54

01 Apr 1968 464.9 P482

Biochemistry, Chemical control (weeds), Crop rotation, Crop yields, Herbicides, Photosynthesis, Potassium, Spraying, Tables (data), Weeds.

22023-68

## FACTORS AFFECTING THE PERFORMANCE OF PREEMERGENCE AND POSTEMERGENCE HERBICIDES IN PICKLING CUCUMBERS. (ABSTRACT).

A R Putnam

*Hortscience* 3(2,SUMMER):94

1968 SB1.H6

Chemical control (weeds), Cucumbers, Environment, Herbicides, Research, Soil structure.

22024-68

## EFFECT OF DICAMBA ON WHEAT AND WILD BUCKWHEAT AT VARIOUS STAGES OF DEVELOPMENT.

P C Quimby J D Nalewaja

*Weed Soc Amer Abstr* 1966 MEETING:5

1966 241 W41

Chemical control (weeds), Dicamba, Herbicides, Plant physiology, Polygonum convolvulus, Wheat.

22025-68

## MECHANICAL CONTROL OF COTTON WEEDS.

P K Rangaiah

*Indian Farming* 16(2):30-31

May 1966 22 IN283

Cotton, Cultural control (weeds), Weed control.

The author discusses the advantages and techniques of mechanical control of weeds in cotton fields in India.

22026-68

## THE HERBICIDAL ACTIVITY OF MSMA AND DSMA ON PURPLE NUTSEDGE.

A B Richards J W Whitworth

*Weed Soc Amer Abstr* 1966 MEETING:8

1966 241 W41

Arsenic compounds, Chemical control (weeds), Cyperus rotundus, Disodium methanearsonate, Dosage, Herbicides, Monosodium acid methanearsonate, Plant physiology.

22027-68

## THE RESPONSE OF RICE AND BARNYARD GRASS TO 3,4-DICHLOROPROPIONANILIDE.

J N Sierra M R Vega

*Philippine Agr* 51(5):438-451

Oct 1967 25 P542

Grasses, Plant metabolism, Propanil, Rice.

22028-68

## CONTROLLING BARNYARD GRASS IN RICE.

D J Swain

*Agr Gaz New S Wales* 78(PT 8):473-475

Aug 1967 23 N472

Chemical control (weeds), Echinochloa, Propanil, Rice.

22029-68

## WEED CONTROL IN UPLAND RICE AT THE UNIVERSITY OF THE PHILIPPINES COLLEGE OF AGRICULTURE.

M R Vega J D Ona E C Paller

*Philippine Agr* 51(5):397-411

Oct 1967 25 P542

Chemical control (weeds), Crop yields, Rice.

22030-68

## NEW KNOWLEDGE ABOUT THE USE OF HERBICIDES IN PERMANENT GRASSLAND. (GE)

F Wagner

*Gesunde Pflanzen* 20(10):215-216,218

Oct 1968 464.8 G33

Biochemistry, Chemical control (weeds), Feed, Herbicides, Pastures.

## OTHER PESTS

22031-68

## RAT BAITS INCORPORATING PARAFFIN WAX.

*Papua New Guinea Agr J* 19(2):88

Sep 1967 23 N453

Baits, Chemical control (pests), Methodology, Paraffin wax, Rats.

22032-68

## THE DISTRIBUTION OF THE MUSK RAT AND ITS CONTROL IN BAVARIA. (GE)

N Mallach

*Gesunde Pflanzen* 20(10):223-227 MAP

Oct 1968 464.8 G33



Musk rats, Population, Rodents, Zoogeography.

## LIVESTOCK PROTECTION

### 22033-68 STUDIES ON THE MECHANISM OF INTERFERON ACTION.

R J Ash  
*Diss Abstr Sect B* 29(5):1771B  
Nov 1968 Z5055.U49D53  
Cells, Culture media, Interferon, Mammals, Microbiology, Proteins, Research.

### 22034-68 AMYLOIDOSIS INDUCED IN MICE BY ESCHERICHIA COLI ENDOTOXIN.

W F Barth J K Gordon J T Willerson  
*Science* 162(3854):694-695  
08 Nov 1968 470 SC12  
Amyloidosis, Cells, Escherichia coli, Injections, Laboratory animals, Mice, Research, Toxins.

### 22035-68 STUDIES ON LEPTOSPIRAL LIPASE. I. CHARACTERIZATION OF LIPASES FROM PATHOGENIC AND SAPROPHYTIC STRAINS.

B Chorvath  
*J Hyg Epidemiol Microbiol Immunol* 12(3):349-355 REF  
1968 448.8 J826  
Enzymes, Hydrogen-ion concentration, Leptospirosis, Lipases, Research, Saprophytes, Temperature, French, German, and Spanish summaries.

### 22036-68 HERITABLE REPRESSION DUE TO PARAMUTATION IN MAIZE.

E H Coe  
*Science* 162(3856):925  
22 Nov 1968 470 SC12  
Corn, Deoxyribonucleic acid, Heredity, Mutation, Plant genetics, Research, Ribonucleic acid.

### 22037-68 VIRUS-LIKE PARTICLES IN THE SPIRAL GANGLION OF THE GUINEA PIG COCHLEA.

J L Craft D A Hilding  
*Science* 162(3861):1485-1487 REF  
27 Dec 1968 470 SC12  
Cells, Ears, Electron microscopy, Guinea pigs, Nervous system, Research, Virus diseases (animals).

### 22038-68 STRUCTURE AND ANTIGENIC PROPERTIES OF A STAPHYLOCOCCAL L FORM.

D C Dannis  
*Diss Abstr Sect B* 29(5):1773B  
Nov 1968 Z5055.U49D53  
Antigens, Culture media, Immunology, Microbiology, Properties, Research, Staphylococcus aureus.

### 22039-68 CURRENT ACTIVITIES--LASSWADE.

*State Vet J* 19(57):278  
Sep 1964 S0F601.0S8  
Chick embryos, Chickens, Culture media, Microscopy, Mycoplasma, Virology, Weather.

### 22040-68 METHODS OF RESTRAINING CATTLE FOR TUBERCULIN TESTING.

D B Morgan  
*State Vet J* 19(57):256-260  
Sep 1964 S0F601.0S8  
Cattle, Equipment, Research, Tuberculin test.

### 22041-68 CALCIUM LOCALIZATION WITHIN LIVE OAT LEAVES USING A SEMICONDUCTOR DETECTOR ASSEMBLY.

A Ringo R V Rechenmann M Melloni R Wilthagen  
*Planta* 81(3):280-286  
1968 450 P693

Autoradiography, Biochemistry, Calcium, Foliar application, Leaves, Oats, Plant translocation.

### 22042-68 THE CLASSIFICATION OF LEPTOSPIRAL STRAINS FROM KAZAKHSTAN.

A A Varfolomeeva S K Kanareykina E P Kozlova  
*J Hyg Epidemiol Microbiol Immunol* 12(3):356-364  
1968 448.8 J826  
Animal diseases, Biochemistry, Copper, Leptospirosis, Research, Serological tests, French, German, and Spanish summaries.

## DISEASES

### 22043-68 BALANTIDIASIS MAY BE MORE COMMON THAN WE THINK.

S S Ahluwalia  
*Indian Farming* 16(10):41-43  
Jan 1967 22 IN283  
Balantidiasis, Diagnosis, Epidemiology, Human diseases, Swine.  
The life history of Balantidium coli and the epidemiology of balantidiosis in swine and man are discussed.

### 22044-68 POTENTIATION BY SILICA OF THE GROWTH OF MYCOBACTERIUM TUBERCULOSIS IN MACROPHAGE CULTURES.

A C Allison P D'Arcy Hart  
*Brit J Exp Pathol* 49(5):465-476 REF  
Oct 1968 448.8 B772  
Laboratory animals, Macrophages, Mycobacterium tuberculosis, Physiology, Research, Silica.

### 22045-68 NATIONAL POULTRY AND TURKEY IMPROVEMENT PLANS AND AUXILIARY PROVISIONS. NOTICE OF PROPOSED RULE MAKING.

R J Anderson  
*Fed Regist* 33(241):18445-18447  
12 Dec 1968 L1.451  
Animal diseases, Artificial insemination, Blood tests, Meat, Poultry, Research, Turkeys.

### 22046-68 TEXAS (SPLENETIC) FEVER IN CATTLE. PERMITTED DIPS.

R J Anderson  
*Fed Regist* 33(236):18089  
05 Dec 1968 L1.451  
Arsenic compounds, Cattle, Coumaphos, Dioxathion, Dipping, Drug therapy, Livestock diseases, Protozoosis, Tissues.

### 22047-68 ENZOOTIC FOOT ROT CONTROL IN SHEEP. (RUM)

C G Anghel  
*Rev Zootech Med Vet* 17(12):57-63 REF  
Dec 1967 49 P943  
Chemical control (pests), Copper sulfate, Foot rot (animals), Sheep, French, Russian and English abstracts

### 22048-68 MOLDY CORN POISONING AS THE MAJOR CAUSE OF AN ENCEPHALOMALACIA SYNDROME IN EGYPTIAN EQUIDAE.

L Badiali M H Abou-Youssef A I Radwan F Hamdy  
*Amer J Vet Res* 29(10):2029-  
Oct 1968 41.8 AM3A  
Asses, Corn, Encephalomalacia, Molds, Poisoning, Toxicology.

### 22049-68 NECROTIC ENTERITIS OF CHICKENS.

B S Bains  
*Australian Vet J* 44(1):40  
Jan 1968 41.8 AU72

Autopsies, Chickens, Clostridium, Drug therapy, Enteritis, Gastrointestinal diseases, Oxytetracycline.

### 22050-68 CLINICAL AND PATHOLOGICAL STUDIES OF BORDER LEICESTER RAMS NATURALLY INFECTED WITH ACTINOBACILLUS SEMINIS.

I D Baynes G C Simmons  
*Australian Vet J* 44(8):339-343 REF  
Aug 1968 41.8 AU72  
Actinobacillus, Animal histology, Epididymitis, Sheep.

### 22051-68 DISEASES OF PIGS AND THEIR CONTROL. SF971.B4. (ge)

H Behrens K Richter  
154P FRANKFURT AM MAIN, DLG VERLAG 1967  
Biochemistry, Breeding, Diagnosis, Drug therapy, Feeding, Livestock diseases, Preventive medicine, Swine, Swine houses.

### 22052-68 THE MORPHOLOGICAL AND BIOLOGICAL EFFECTS OF VARIOUS ANTISERA ON AVIAN INFECTIOUS BRONCHITIS VIRUS.

D M Berry J D Almeida  
*J Gen Virol* (3,PT 1):97-102 REF  
Jul 1968 Q0R360.0A10J6  
Antibodies, Electron microscopy, Heat, Infectious bronchitis, Morphology, Research, Virus diseases (animals).

### 22053-68 QUANTITATION OF SUSCEPTIBILITY OF SWINE TO INFECTION WITH PASTEURELLA TULARENSIS.

W S Bivin A L Hoggie  
*Amer J Vet Res* 28(126):1619-1621  
Sep 1967 41.8 AM3A  
Immunity, Pasteurella tularensis, Swine.

### 22054-68 SURVEY SHOWS WEAKNESS IN MASTITIS CONTROL.

B W Bootes  
*Agr Gaz New S Wales* 78(PT 8):476-478  
Aug 1967 23 N472  
Cattle, Drug therapy, Hygiene, Mastitis, Streptococcus.

### 22055-68 MAREK'S DISEASE. (FR)

A. Brion  
*Rec Med Vet* 144(10):911-926 REF  
Oct 1968 41.8 R24  
Animal physiology, Avian lymphomatosis, Diagnosis, Herpesviruses, Histology, Immunity, Poultry.

The author discusses the history, symptomatology, virus agent, and etiology of Marek's disease, avian lymphomatosis. The selection of resistant lines of fowl is suggested, because no specific method of control is available.

### 22056-68 NEW ZEALAND VETERINARIANS STUDY ANIMAL DISEASES IN THAILAND.

E O Brookbanks P Gallagher P G Davenport  
*New Zeal J Agr* 114(1):37,39,41,43  
Jan 1967 23 N48J  
Animal breeding, Animal quarantine, Cattle, Epizootic diseases, Foot-and-mouth disease, Immunization, Livestock diseases.

Animal diseases, particularly foot and mouth disease, which occur in Thailand were studied by New Zealand veterinarians. Disease outbreaks, control measures, quarantine and breeding stations were studied and evaluated.

### 22057-68 STEPS CAN BE TAKEN TO CURB MASTITIS.

E O Brookbanks  
*New Zeal J Agr* 114(6):62-63,65  
Jun 1967 23 N48J

22058-68

Dairy bacteriology, Hygiene, Livestock diseases, Mastitis.

Mastitis control in New Zealand is discussed. Biological tests and hygienic improvements are suggested.

22058-68

COMPARISON OF SELECTED CHARACTERISTICS OF FOUR STRAINS OF INFECTIOUS BOVINE RHINOTRACHEITIS VIRUS.

G M Buening J B Gratzek

*Amer J Vet Res* 28(126):1257-1267 REF

Sep 1967 41.8 AM3A

Cattle, Diagnosis, Infectious bovine rhinotracheitis virus, Tissue culture.

22059-68

CRADLES MAKE FOOTROT TREATMENT EASIER.

R E Burnell

*New Zeal J Agr* 114(4):50-51,53

Apr 1967 23 N48J

Diagnosis, Equipment, Foot rot (animals), Methodology, Sheep.

A cradle for easy treatment and inspection for foot rot of sheep in New Zealand is described.

22060-68

EXPERIMENTAL IMMUNITY TO TUBERCULOSIS IN RABBITS IMMUNIZED WITH BCG MICROSMAL FRACTION.

R M Burns

*Diss Abstr Sect B* 29(5):1772B

Nov 1968 Z5055.U49D53

Animal diseases, Immunity, Microbiology, Rabbits, Research, Tuberculosis, Tuberculosis vaccines.

22061-68

THE PERSISTENCE OF FOOT-AND-MOUTH DISEASE VIRUS IN SHEEP.

R Burrows

*J Hyg* 66(4):633-640 REF

Dec 1968 449.8 J82

Epizootic diseases, Foot-and-mouth disease virus, Sheep.

22062-68

POISONING OF CATTLE BY POLYGALA KLOTZCHII, CHODAT, IN THE REGION OF PONTAL (STATE OF SAO PAULO). (POR)

W V A de Camargo W Mengato F Platzech T Morita

*Biologico* 34(10):221-223

Oct 1968 442.8 B529

Cattle, Guinea pigs, Poisonous plants, Polygala, Toxicology.

22063-68

HOST SPECIFICITY AND SEROLOGIC DISPARITY OF AFRICAN SWINE FEVER VIRUS AND AMPHIBIAN POLYHEDRAL CYTOPLASMIC VIRUSES.

P E Came A H Dardiri

*Soc Exp Biol Med Proc* 130(1):128-132 REF

Jan 1969 442.9 SO1

African swine fever virus, Amphibians, Host relationships, Serological tests, Swine, Viruses.

22064-68

REGROWTH OF PRIMARY CELL CULTURES AFTER INFECTION WITH FOOT-AND-MOUTH DISEASE VIRUS.

C H Campbell

*Amer J Vet Res* 28(126):1601-1603

Sep 1967 41.8 AM3A

Cattle, Foot-and-mouth disease virus, Mice, Swine, Tissue culture.

22065-68

AFRICAN SWINE FEVER. APPLICATION OF IMMUNO-FLUORESCENCE TO THE STUDY OF TISSUE CULTURES. (FR)

R Carnero A Lucas F Ruiz B Larenaudie

*Rec Med Vet* 144(10):937-949 REF

Oct 1968 41.8 R24

African swine fever virus, Biochemistry, Diagnosis, Fluorescent antibody technic, Immunization, Tissue culture.

22066-68

MYCOBACTERIUM AVIUM INFECTION IN CATTLE: A CASE SERIES.

D R Cassidy L G Morehouse H A McDaniel

*Amer J Vet Res* 29(2):405-410 REF

Feb 1968 41.8 AM3A

Animal histology, Cattle, Mycobacterium avium, Surveys.

22067-68

PROPAGATION OF THE NEWCASTLE DISEASE VIRUS ON TISSUE CULTURES AT DIFFERENT TEMPERATURES. (CZ)

K Cernik E Cernikova

*Czech Min Zemed Les Hospod Ustav Vedeckotech Inform Vet Med* 13(7):393-402 REF

08 Jul 1968 41.9 C333

Newcastle disease virus, Temperature, Tissue culture. Russian, English and German abstracts

22068-68

ERADICATING AND CONTROLLING BRUCELLOSIS IN SHEEP.

D G Christie

*Agr Gaz New S Wales* 78(PT 4):221-225

Apr 1967 23 N472

Brucellosis, Complement fixation, Hygiene, Immunization, Sheep, Sterility.

22069-68

THESE PLANTS MIGHT SPELL DEATH TO YOUR CATTLE.

J Christopher

*Indian Farming* 16(9):43,45-47,49

Dec 1966 22 IN283

Antidotes, Cattle, Poisonous plants.

The identification of and antidotes for poisonous plants which kill cattle in India are listed.

22070-68

CIGUATERA POISONING IN CATS IN BRISBANE.

L Clark G B Whitwell

*Australian Vet J* 44(2):81

Feb 1968 41.8 AU72

Cats, Fish, Food poisoning, Poisoning, Surveys.

22071-68

UNCOATING OF NEWCASTLE DISEASE VIRUS.

W D Collard

*Diss Abstr Sect B* 29(5):1772B-1773B

Nov 1968 Z5055.U49D53

Biochemistry, Chickens, Culture media, Newcastle disease virus, Research.

22072-68

IMMUNODIFFUSION REACTIONS BETWEEN HUMAN SERA AND MYCOPLASMA PNEUMONIAE.

R M Conant N L Somerson L B Senterfit

*Soc Exp Biol Med Proc* 129(2):401-407 REF

Nov 1968 442.9 SO1

Complement fixation, Fluorescent antibody technic, Hemagglutination, Mycoplasma, Serological tests.

22073-68

EQUINE INFLUENZA IN MEXICO. ISOLATION AND STUDY OF THE STRAIN E/EQUI 2/MEXICO/1/66. (SP)

R G Cunha G G Lopez L G Mijares R Delecolle

*Rev Latinoamer Microbiol Parasitol* 10(4,OCT-DEC):197-204 REF

Dec 1968 448.8 R32

Equine influenza, Horses, Serological tests. English abstract

22074-68

BRITAIN'S EXPERIENCE WITH FOOT AND MOUTH DISEASE.

R M Davidson

*New Zeal J Agr* 114(6):32

Jun 1967 23 N48J

Epizootic diseases, Foot-and-mouth disease, Virus diseases (animals).

The author discusses the epizootiology and recent outbreaks of foot and mouth disease in England.

22075-68

TOXICITY STUDIES OF LISTERIA MONOCYTOGENES GROWN IN VIVO.

R A DiCapua J W Osebold K R Stone

*Amer J Vet Res* 29(10):2023-2028 REF

Oct 1968 41.8 AM3A

Bacterial diseases (animals), Biological assay, Listeria monocytogenes, Mice, Toxicology.

22076-68

ANTIBODY TO RHINOVIRUS IN HUMAN SERA. I. STANDARDIZATION OF NEUTRALIZATION TEST.

R G Douglas W F Fleet T R Cate R B Louch

*Soc Exp Biol Med Proc* 127(2):497-502

Feb 1968 442.9 SO1

Antibodies, Immunodiagnosis, Rhinoviruses.

22077-68

VACCINATION AGAINST JOHNE'S DISEASE AND THE CREATION OF CARRIERS.

T M Doyle

*State Vet J* 19(57):212-213

Sep 1964 S0F601.0S8

Calves, Immunization, Johne's disease, Laboratories, Microscopy, Milk analysis, Research.

22078-68

THE WORKING PARTY OF FASCIOLIASIS IN WALES.

C M Edwards C B Ollerenshaw

*State Vet J* 19(57):244-255,MAP

Sep 1964 S0F601.0S8

Epizootic diseases, Fascioliasis, Reports, Research, Trematoda.

22079-68

SEROLOGIC STUDY OF REOVIRUS INFECTION IN DOGS.

G A Fairchild D Cohen

*Amer J Vet Res* 28(126):1487-1490

Sep 1967 41.8 AM3A

Dogs, Reoviruses, Serodiagnosis.

22080-68

APPLICATION OF STRESSES TO FOOT-AND-MOUTH DISEASE VIRUS.

O N Fellowes

*Amer J Vet Res* 28(127):1873-1880 REF

Nov 1967 41.8 AM3A

Epizootic diseases, Foot-and-mouth disease virus, Nitrous acid, Ribonucleic acid, Stress, Tissue culture, Ultraviolet rays.

22081-68

ENDOTOXIN PROPERTIES OF LEPTOSPIRA CANICOLA.

D R Finco D G Low

*Amer J Vet Res* 28(127):1863-1872 REF

Nov 1967 41.8 AM3A

Biological assay, Endotoxins, Escherichia coli, Leptospira canicola, Rabbits.

22082-68

ANTIBODY TO RHINOVIRUS IN HUMAN SERA. II. HETEROTYPIC RESPONSES.

W F Fleet R G Douglas T R Cate R B Couch

*Soc Exp Biol Med Proc* 127(2):503-509 REF

Feb 1968 442.9 SO1

Antibodies, Immunodiagnosis, Rhinoviruses.

22083-68

THE MECHANISM OF LYMPHOPENIA PRODUCED BY CHRONIC IRRADIATION OF THE RAT SPLEEN.

W L Ford

*Brit J Exp Pathol* 49(5):502-510 REF

Oct 1968 448.8 B772

Blood, Irradiation, Laboratory animals, Phosphorus isotopes, Rats, Research, Spleen.



- 22084-68**  
**THE EFFECT OF VIBRIO FETUS VACCINATION ON THE BREEDING EFFICIENCY OF COWS BRED TO VIBRIO FETUS-INFECTED BULLS.**  
 A H Frank J H Bryner P A O'Berry  
*Amer J Vet Res* 28(126):1237-1242 REF  
 Sep 1967 41.8 AM3A  
 Animal breeding, Cattle, Immunization, Reproduction, Vibrio.
- 22085-68**  
**THE COMPLEMENT-FIXATION TEST FOR AVIAN LEUKOSIS.**  
 I G S Furminger A J Beale  
*J Gen Virol* (3,PT 1):25-34 REF  
 Jul 1968 Q0R360.0A10J6  
 Antibodies, Antigens, Avian leukosis complex, Complement fixation, Hamsters, Neoplasms, Research, Rous sarcoma virus, Virus diseases (animals).
- 22086-68**  
**ULTRASTRUCTURE OF ANAPLASMA MARGINALE FIXED WITH GLUTARALDEHYDE AND OSMIUM TETROXIDE.**  
 D W Gates T O Roby T E Amerault D W Anthony  
*Amer J Vet Res* 28(126):1577-1580 REF  
 Sep 1967 41.8 AM3A  
 Anaplasma, Cattle, Cytology, Electron microscopy.
- 22087-68**  
**PREVALENCE OF SALMONELLOSIS AND BLACKLEG IN MATERIAL FROM CATTLE EXAMINED DURING THE FIVE-YEAR PERIOD 1963-1967 IN THE STATE OF SAO PAULO. (POR)**  
 W Giorgi C Troise  
*Biologico* 34(10):229-231  
 Oct 1968 442.8 B529  
 Bones, Cattle, Clostridium, Livestock diseases, Salmonella, Surveys.
- 22088-68**  
**ATTEMPTS TO RECOVER MYCOPLASMA SUIPNEUMONIAE FROM EXPERIMENTAL AND NATURAL CASES OF ENZOOTIC PNEUMONIA IN PIGS.**  
 R F W Goodwin A P Pomeroy P Whittlestone  
*J Hyg* 66(4):595-603 REF  
 Dec 1968 449.8 J82  
 Epizootic diseases, Mycoplasma suipneumoniae, Pneumonia, Swine.
- 22089-68**  
**PRODUCTION OF ENZOOTIC PNEUMONIA IN PIGS WITH MYCOPLASMA SUIPNEUMONIAE GROWN IN EMBRYONATED HEN'S EGGS.**  
 R F W Goodwin J M W Hurrell P Whittlestone  
*Brit J Exp Pathol* 49(5):431-435  
 Oct 1968 448.8 B772  
 Eggs, Livestock diseases, Mycoplasma suipneumoniae, Pneumonia, Research, Swine, Tissue culture.
- 22090-68**  
**GRASS TETANY IN CATTLE-USING MOLASSES-MAGNESIUM OXIDE MIXTURES TO PREVENT IT.**  
 J S Healey  
*Czech Min Zemed Les Hospod Ustav Vedeckotech Inform Vet Med* 13(7):392-393  
 Jul 1967 23 N472  
 Animal nutrition, Cattle, Grass tetany, Magnesium oxide, Molasses.  
 The prevention of grass tetany in Australian cattle, a nutritional deficiency disease, with molasses and magnesium oxide is discussed.
- 22091-68**  
**EFFECTS OF TEMPERATURE ON IN VITRO EXCYSTATION OF VARIOUS EIMERIA SPECIES.**  
 L E Hibbert D M Hammond  
*Exp Parasitol* 23(2):161-170 REF  
 Oct 1968 436.8 EX7  
 Animal physiology, Asexual reproduction, Carbon dioxide, Cysts, Eimeria, Ovarian cysts, Sporozoa, Temperature.
- 22092-68**  
**LABORATORY DIFFERENCES BETWEEN THE WS STRAIN OF INFLUENZA A VIRUS AND ITS NEUROTROPIC VARIANTS.**  
 D Hobson E A Gould H I Flockton M G Gregory  
*Brit J Exp Pathol* 49(5):516-524 REF  
 Oct 1968 448.8 B772  
 Influenza viruses, Laboratory animals, Mice, Neurotropic viruses, Physiology, Research, Serological tests, Tissue culture, Virus diseases (animals).
- 22093-68**  
**THE ISOLATION AND RECOGNITION OF VIRUSES.**  
 R A Huck  
*State Vet J* 19(57):236-243  
 Sep 1964 S0F601.0S8  
 Chick embryos, Eggs, Histology, Laboratories, Microorganisms, Research, Serological tests, Viruses.
- 22094-68**  
**BREEDING DISEASE-RESISTANT DOMESTIC ANIMALS.**  
 F B Hutt  
*Agr Sci Rev (THIRD QUARTER)* 6(3):11-18 REF  
 1968 A31.3 AG893  
 Animal breeding, Animal diseases, Animal genetics, Immunity.
- 22095-68**  
**CONTAGIOUS PLEURO-PNEUMONIA OF GOATS.**  
 P R K Iyer  
*Indian Farming* 16(2):40-42,44  
 May 1966 22 IN283  
 Goats, Immunization, Pleuropneumonia, Viruses.
- 22096-68**  
**INFLUENCE OF EGG ALBUMIN-INDUCED LEUKOPENIA ON EXPERIMENTAL AEROBACTER AEROGENES MASTITIS AND ON NATURAL INFECTION OF MAMMARY GLAND WITH COAGULASE-NEGATIVE STAPHYLOCOCCUS IN A COW.**  
 N C Jain J Lasmanis O W Schalm  
*Amer J Vet Res* 28(126):1243-1250 REF  
 Sep 1967 41.8 AM3A  
 Aerobacter aerogenes, Cattle, Immunity, Mastitis, Staphylococcus.
- 22097-68**  
**ABORTIVE AND TERATOGENIC EFFECTS OF LOCOWEED ON SHEEP AND CATTLE.**  
 L F James J L Shupe W Binns R F Keeler  
*Amer J Vet Res* 28(126):1379-1388 REF  
 Sep 1967 41.8 AM3A  
 Abnormalities, Abortion, Astragalus, Cattle, Poisonous plants, Pregnancy, Sheep, Toxicology.
- 22098-68**  
**ON THE PREPARATION OF IMMUNE GLOBULINS AGAINST DISTEMPER AND INFECTIOUS HEPATITIS OF DOGS. (CZ)**  
 E Jiran G Petr Z Urbanek  
*Czech Min Zemed Les Hospod Ustav Vedeckotech Inform Vet Med* 13(7):423-430 REF  
 08 Jul 1968 41.9 C333  
 Canine distemper, Dogs, Globulins, Immunization, Infectious canine hepatitis, Russian, English and German abstracts
- 22099-68**  
**GROWTH OF RIFT VALLEY FEVER VIRUS IN TISSUE CULTURE.**  
 R W Johnson M D Orlando  
*Amer J Vet Res* 29(2):463-471 REF  
 Feb 1968 41.8 AM3A  
 Rift Valley fever virus, Tissue culture, Virus diseases.
- 22100-68**  
**TESTING OF THE PATHOGENICITY OF VIRUS STRAINS OF THE NEWCASTLE DISEASE IN PIGEONS. (CZ)**  
 V Kabelik  
*Czech Min Zemed Les Hospod Ustav Vedeckotech Inform Vet Med* 13(7):385-392  
 08 Jul 1968 41.9 C333  
 Microbiology, Newcastle disease virus, Pigeons, Russian, English and German abstracts
- 22101-68**  
**COMPARATIVE PATHOLOGICAL ANATOMY OF THE HEPATITIS VIRUS OF MAN AND DOGS. (GE)**  
 P Kapp  
*Acta Vet (budapest)* 18(2):193-204 REF  
 1968 41.8 AC83  
 Animal anatomy, Autopsies, Dogs, Virus hepatitis.
- 22102-68**  
**THE TRANSMISSION OF DERMATOPHILOSIS (MYCOTIC DERMATITIS) IN SHEEP.**  
 P D Ke Riche  
*Australian Vet J* 44(2):64-67 REF  
 Feb 1968 41.8 AU72  
 Epidemiology, Livestock diseases, Mycotic dermatitis, Sheep.
- 22103-68**  
**INFECTIOUS BOVINE RHINOTRACHEITIS-INFECTIOUS PUSTULAR VULVOVAGINITIS VIRUS INFECTION IN PREGNANT COWS.**  
 J W Kendrick O C Straub  
*Amer J Vet Res* 28(126):1269-1282  
 Sep 1967 41.8 AM3A  
 Abortion, Cattle, Coital exanthema, Diagnosis, Infectious bovine rhinotracheitis virus, Pregnancy.
- 22104-68**  
**CYTOLOGIC STUDIES IN POLYOMA VIRUS-INFECTED MOUSE EMBRYO CELLS.**  
 G P Khare R A Consigli  
*Amer J Vet Res* 28(126):1527-1536 REF  
 Sep 1967 41.8 AM3A  
 Cytology, Mice, Physiology, Polyoma virus, Tissue culture.
- 22105-68**  
**ON THE SPECIFIC MECHANISM OF THE TRANSMISSION OF LEPTOSPIRAL INFECTION.**  
 V S Kiktenko  
*J Hyg Epidemiol Microbiol Immunol* 12(3):341-348 REF  
 1968 448.8 J826  
 Animal diseases, Epidemiology, Infectious diseases, Kidneys, Leptospirosis, Research, Zoonoses, French, German, and Spanish summaries.
- 22106-68**  
**UTERINE-AMNIONIC PATHWAY OF INFECTING THE RABBIT FETUS WITH LISTERIA MONOCYTOGENES.**  
 C D King C Olson  
*Amer J Vet Res* 28(126):1555-1567 REF  
 Sep 1967 41.8 AM3A  
 Fetus, Fluorescent antibody technique, Histology, Listeria monocytogenes, Rabbits.
- 22107-68**  
**STUDIES OF LIVE ATTENUATED JAPANESE ENCEPHALITIS VACCINE IN SWINE.**  
 K Kodama N Sasaki Y K Inoue  
*J Immunol* 100(1):194-200 REF  
 Jan 1968 448.8 J8232  
 Colostrum, Injections, Japanese b encephalitis, Research, Swine, Vaccines.
- 22108-68**  
**THE INVESTIGATION OF SCRUB TYPHUS IN THE USSR.**  
 S M Kulagin I V Tarasevic N I Kudryasova L F Plotnikova  
*J Hyg Epidemiol Microbiol Immunol* 12(3):257-263 REF  
 1968 448.8 J826

22109-68

Animal vectors, Epidemiology, Infectious diseases, Insect vectors, Research, Scrub typhus. French, German, and Spanish summaries.

22109-68

SEROLOGIC ANALYSIS OF BOVINE VIBRIOSIS.

K Larson I. Ringen

*Amer J Vet Res* 28(126):1231-1235 REF

Sep 1967 41.8 AM3A

Cattle, Electrophoresis, Serodiagnosis, Vibrio.

22110-68

EPIZOOTIOLOGIC STUDIES OF Q FEVER IN WASHINGTON DAIRY CATTLE.

D R Lingard

*Diss Abstr Sect B* 29(5):1539B

Nov 1968 Z5055.U49D53

Dairy cattle, Epizootic diseases, Livestock diseases, Q fever, Research.

22111-68

NEWCASTLE DISEASE IN ENGLAND AND WALES CONTROL BY VACCINATION--THE FIRST YEAR.

J G Loxam

*State Vet J* 19(57):197-211

Sep 1964 S0F601.0S8

Animal diseases, Immunization, Newcastle disease, Surveys.

22112-68

ELECTROPHORETIC FRACTIONATION OF CLOSTRIDIUM HEMOLYTICUM TOXIC CULTURE FLUIDS.

E A Lozano L D S Smith

*Amer J Vet Res* 28(126):1569-1576 REF

Sep 1967 41.8 AM3A

Clostridium hemolyticum, Electrophoresis, Erythrocytes, Proteins, Toxins.

22113-68

IN VIVO PRODUCTION OF A TOXIN(S) BY LISTERIA MONOCYTOGENES.

P K Mellwain R W Barnes

*Amer J Vet Res* 29(2):483-485

Feb 1968 41.8 AM3A

Chinchillas, Listeria monocytogenes, Mortality, Toxicology, Toxins.

22114-68

EVALUATION OF THE FLUORESCENT ANTIBODY-CELL CULTURE TEST FOR HOG CHOLERA DIAGNOSIS.

W L Mengeling J P Torrey

*Amer J Vet Res* 28(127):1653-1659 REF

Nov 1967 41.8 AM3A

Diagnosis, Fluorescent antibody technic, Hog cholera, Swine.

22115-68

PATHOGENESIS AND PATHOLOGIC FEATURES OF AVIAN ENCEPHALOMYELITIS IN CHICKS.

G C Mohanty J L West

*Amer J Vet Res* 29(12):2387-2400

Dec 1968 41.8 AM3A

Animal physiology, Avian encephalomyelitis, Central nervous system, Chickens, Hydrocephalus.

22116-68

SEROLOGIC COMPARISON OF NORTH AMERICAN AND JAPANESE PORCINE PICORNAVIRUSES.

T. Morimoto H W Dunne J T Wang

*Amer J Vet Res* 29(2):2275-2280 REF

Dec 1968 41.8 AM3A

Picornaviruses, Serological tests, Swine.

22117-68

SYNTHESIS AND CYTOPATHOGENESIS OF AFRICAN SWINE FEVER VIRUS IN PORCINE CELL CULTURES.

J Moulton L Coggins

*Amer J Vet Res* 29(2):219-232 REF

Feb 1968 41.8 AM3A

African swine fever virus, Biochemistry, Cytopathology, Tissue culture.

22118-68

ERADICATION OF VIBRIOSIS FROM A STUD HERD.

D H Mumford

*Agr Gaz New S Wales* 78(PT 2):98-99

Feb 1967 23 N472

Abortion, Bacterial diseases (animals), Cattle, Vibriosis.

22119-68

EXPERIENCES CONCERNING THE PREPARATION AND APPLICATION OF MYCOPLASMA ANTIGEN.

G Nagy

*Acta Vet (budapest)* 18(2):173-176

1968 41.8 AC83

Agglutination, Chickens, Hemagglutination, Mycoplasma gallisepticum antigens, Respiratory diseases, Serodiagnosis.

22120-68

THE OCCURRENCE OF FOOT-AND-MOUTH DISEASE IN THE STATE OF SAO PAULO IN 1968. (POR)

L P Netto A A Pinto O Suga O Yida

*Biologico* 34(10):226-228

Oct 1968 442.8 B529

Foot-and-mouth disease, Livestock diseases, Surveys.

22121-68

THE ROLE OF DIET AND THE RETICULOENDOTHELIAL SYSTEM IN THE RESPONSE OF RATS TO SALMONELLA TYPHIMURIUM INFECTION.

P M Newberne C E Hunt V R Young

*Brit J Exp Pathol* 49(5):448-457 REF

Oct 1968 448.8 B772

Copper, Deficiency diseases, Diet, Immunity, Proteins, Rats, Research, Reticuloendothelial system, Salmonella typhimurium, Vitamin b complex.

22122-68

STUDIES ON PATHOLOGY OF RESPIRATORY DISEASES OF POULTRY WITH SPECIAL REFERENCE TO VIRAL AND P. P. L. O. INFECTIONS.

S K Nigam

*Agra Univ J Res Sci* 16(PT 1):183-184

Jan 1967 513 AG8

Histology, Pleuropneumonia-like organisms, Poultry, Respiratory diseases, Virus diseases (animals).

22123-68

INFECTIOUS BOVINE RHINOTRACHEITIS: CORRELATION OF FETAL AND PLACENTAL LESIONS WITH VIRAL ISOLATIONS.

N V Owen T L Chow J A Molello

*Amer J Vet Res* 29(10):1959-1965

Oct 1968 41.8 AM3A

Animal physiology, Cattle, Cytopathology, Rhinotracheitis, Tissue culture.

22124-68

INFECTIOUS BOVINE RHINOTRACHEITIS: RELATIONSHIP OF LEVEL OF MATERNAL ANTIBODY TITER TO INCIDENCE OF FETAL DEATH AND ABORTION.

N V Owen T L Chow J A Molello

*Amer J Vet Res* 29(10):1967-1970

Oct 1968 41.8 AM3A

Abortion, Antibodies, Cattle, Rhinotracheitis, Virus diseases (animals).

22125-68

INFECTIOUS LARYNGOTRACHEITIS OF POULTRY. (RUM)

I Patrascu C Surdan V Rusu V Popa V Gogoasa

M Taga

*Rev Zootech Med Vet* 17(12):31-56 REF

Dec 1967 49 P943

Epizootic diseases, Histology, Infectious laryngotracheitis, Poultry diseases, Serodiagnosis, Virology. French, Russian and English abstracts

22126-68

CHEMICALLY CHARACTERIZED MEDIA FOR STUDY OF FOOT-AND-MOUTH DISEASE VIRUS IN BABY HAMSTER KIDNEY CELLS.

J Polatnick

*Appl Microbiol* 15(2):228-232

Mar 1967 448.3 AP5

Cells, Culture media, Foot-and-mouth disease virus, Hamsters, Kidneys, Laboratories, Virus diseases (animals).

22127-68

KERATOCONJUNCTIVITIS PRODUCED BY MORAXELLA BOVIS IN LABORATORY ANIMALS.

G W Pugh D E Hughes T J McDonald

*Amer J Vet Res* 29(10):2057-2061 REF

Oct 1968 41.8 AM3A

Bacterial diseases (animals), Keratoconjunctivitis, Laboratory animals, Moraxella, Sheep.

22128-68

PASSIVE HEMOLYTIC ANTIBODY RESPONSE OF PRIMED, PARTIALLY RESISTANT MICE TO HEAT-KILLED SALMONELLA TYPHIMURIUM VACCINE.

J P Ransom

*Soc Exp Biol Med Proc* 128(2):419-423 REF

Jun 1968 442.9 SO1

Antibodies, Bacterial vaccines, Immunity, Mice, Salmonella typhimurium.

22129-68

INFLUENCE OF STREPTOCOCCUS EQUISIMILIS ON SITES OF ENDOCHONDRAL OSSIFICATION IN SWINE.

E D Roberts F K Ramsey W P Switzer J M Layton

*Amer J Vet Res* 28(127):1677-1686 REF

Nov 1967 41.8 AM3A

Bone diseases, Calcium, Streptococcus, Swine.

22130-68

ISOLATION OF THE GROUP-SPECIFIC POLYSACCHARIDE OF MYCOBACTERIUM TUBERCULOSIS.

B Sandoval S Estrada-Parra

*Rev Latinoam Microbiol Parasitol* 10(4,OCT-DEC):171-173 REF

Dec 1968 448.8 R32

Immunization, Mycobacterium tuberculosis, Polysaccharides, Serological tests.

22131-68

BLOOD SERUM FACTORS ASSOCIATED WITH ERYTHROPHAGOCYTOSIS IN CALVES WITH ANAPLASMOSIS.

W F Schroeder M Ristic

*Amer J Vet Res* 29(10):1991-1995 REF

Oct 1968 41.8 AM3A

Anaplasmosis, Cattle, Erythrocytes, Immunity, Phagocytosis, Serological tests.

22132-68

COMPARISON OF A BOVINE ENTEROVIRUS AND FOOT-AND-MOUTH DISEASE VIRUS.

F W Scott G E Cottral

*Amer J Vet Res* 28(126):1597-1600 REF

Sep 1967 41.8 AM3A

Bovine enteroviruses, Cattle, Foot-and-mouth disease, Serological tests, Tissue culture.

22133-68

SOME CONSIDERATIONS ON THE NAME BOVINE MALARIA. (FR)

E Sergent

*Nancy Univ Fac Pharm Ass Diplomes Microbiol Bull* 110(2ND TRIMESTER):2-5

1968 448.2 N152

Cattle, Immunity, Malaria, Nomenclature, Symbiosis, Viruses.

22134-68

PROBLEM OF AVIAN LEUKOSIS IN LAHORE.

S A Sheikh M Ahmad K A Tahir

*Pakistan J Sci* 19(5-6):212-217 REF

Nov 1967 475 P172



Avian leucosis complex, Avian lymphomatosis, Chickens, Immunization, Pest control, Poultry hatcheries.

A study was made of the high incidence of avian leucosis in Lahore, Pakistan. Heavy economic losses were caused by the lymphomatosis in the first laying season of brooding chickens. Hatcheries and parent stocks are discussed as the source of the infection and a review of previous literature is given.

**22135-68**  
**EFFECTS OF LISTERIA MONOCYTOGENES HEMOLYSINS ON THE ISOLATED ILEUM OF RABBIT.**

I H Siddique C A Walker

*Amer J Vet Res* 28(127):1843-1849 REF

Nov 1967 41.8 AM3A

Drug therapy, Hemolysins, *Listeria monocytogenes*, Rabbits.

**22136-68**  
**VERVET MONKEY DISEASE: EXPERIMENTAL INFECTION OF GUINEAPIGS AND MONKEYS WITH THE CAUSATIVE AGENT.**

D I H Simpson I Zlotnik D A Rutter

*Brit J Exp Pathol* 49(5):458-464

Oct 1968 448.8 B772

Animal diseases, Guinea pigs, Human diseases, Laboratory animals, Monkeys, Research, Reticuloendothelial system.

**22137-68**  
**VACCINATION AGAINST LEPTOSPIROSIS: IMMUNOGENICITY OF VIABLE, AVIRULENT LEPTOSPIRA POMONA IN HAMSTERS, SWINE, AND CATTLE.**

O H V Stalheim

*Amer J Vet Res* 29(2):473-478 REF

Feb 1968 41.8 AM3A

Cattle, Immunization, *Leptospira pomona*, Swine.

**22138-68**  
**NEUTRALISING ANTIBODIES FOR AVIAN INFECTIOUS BRONCHITIS VIRUS IN QUEENSLAND POULTRY FLOCKS.**

P Stephens G C Simmons

*Australian Vet J* 44(1):29-30

Jan 1968 41.8 AU72

Antibodies, Chickens, Infectious bronchitis, Serodiagnosis, Virus diseases (animals).

**22139-68**  
**VACCINATION OF CONGENITALLY-IMMUNE CHICKS AGAINST NEWCASTLE DISEASE VIRUS.**

H D Stone W A Boney

*Soc Exp Biol Med Proc* 128(2):525-530 REF

Jun 1968 442.9 SO1

Antibodies, Chickens, Immunization, Newcastle disease virus.

**22140-68**  
**DIAGNOSIS OF TRICHOMONAS FOETUS INFECTION IN BULLS.**

R Todorovic S H McNutt

*Amer J Vet Res* 28(126):1581-1590 REF

Sep 1967 41.8 AM3A

Cattle, Culture media, Diagnosis, *Trichomonas*, Trichomoniasis.

**22141-68**  
**TUMOUR METABOLIC INHIBITION OF SERUM FROM PARTIALLY HEPATECTOMIZED RATS AS A SPECIFIC LACK OF COMPENSATION MECHANISMS IN TUMOUR CELLS.**

M Volm H Wrba H Hinderer

*Brit J Exp Pathol* 49(5):496-501

Oct 1968 448.8 B772

Cells, Culture media, Laboratory animals, Metabolism, Neoplasms, Rats, Research, Serum.

**22142-68**  
**SWINE FEVER ERADICATION CAMPAIGN 1963-64.**

J Watson

*State Vet J* 19(57):261-274

Sep 1964 S0F601.OS8

Diagnosis, Histology, Hog cholera, Research, Swine, Vaccines.

**22143-68**  
**IMMUNOLOGIC AND HISTOLOGIC STUDIES OF A HAMSTER ADENOVIRUS TUMOR AND A MOUSE MAMMARY TUMOR.**

C J Wood

*Diss Abstr Sect B* 29(5):1561B

Nov 1968 Z5055.U49D53

Adenoviruses, Hamsters, Histology, Immunology, Mammary glands, Mice, Neoplasms, Research, Virus diseases (animals).

**22144-68**  
**CARDIOPULMONARY VALUES IN NORMAL AND HEARTWORM-INFECTED DOGS.**

D A Yarns R J Tashjian

*Amer J Vet Res* 28(126):1461-1473 REF

Sep 1967 41.8 AM3A

Blood pressure, *Dirofilaria immitis*, Dogs, Electrocardiograms, Heart failure, Phonocardiograms, Physiology.

**22145-68**  
**RELATION OF INTERFERON SYNTHESIS TO ABORTIVE REPLICATION OF NEWCASTLE DISEASE VIRUS IN L CELLS.**

J S Youngner A W Scott

*J Virology* 2(1):81-82

Jan 1968 QR360.J6

Cells, Interferon, Newcastle disease virus, Proteins, Virus diseases (animals).

## ARTHROPODS

**22146-68**  
**ATTENTION TO CATTLE LICE CAN BE PROFITABLE.**

C C Banks

*New Zeal J Agr* 114(6):24-25

Jun 1967 23 N48J

Anoplura, Cattle, Chemical control (insects), Mallophaga.

Lice of New Zealand cattle and their control are described.

**22147-68**  
**EXTERNAL PARASITES OF PIGS.**

R E Burnell J C Elliot

*New Zeal J Agr* 114(1):18-19,21

Jan 1967 23 N48J

Acarina, Anoplura, Chemical control (pests), Swine.

The author discusses New Zealand external parasites of swine, including methods for identifying and controlling infestations of lice and mites.

**22148-68**  
**INSECT TORMENTORS OF LIVESTOCK: IV. THE MITES.**

R P Chaudhury

*Indian Farming* 16(5):43-45,49

Aug 1966 22 IN283

Acaricides, Acarina, Benzene hexachloride, Dieldrin, DDT, Host relationships, Livestock diseases.

Life cycles, ecology and chemical control of mites of livestock in India is discussed.

**22149-68**  
**INSECT TORMENTORS OF LIVESTOCK: III. FLEAS AND TICKS.**

R P Chaudhury

*Indian Farming* 16(4):11-15

Jul 1966 22 IN283

Argas persicus, Benzene hexachloride, Chemical control (insects), DDT, Insecticides, Ixodidae, Siphonaptera.

Life cycles, including host relationships and chemical control of fleas and ticks attaching livestock in India are discussed.

**22150-68**  
**SCALY LEG IN POULTRY--A PARASITIC DISEASE.**

J S Healey

*Agr Gaz New S Wales* 78(PT 10):602-603

Oct 1967 23 N472

Chemical control (insects), Hygiene, Mites, Poultry diseases, Scaly leg.

Chemical control of mites causing scaly leg in poultry of Australia is discussed.

**22151-68**  
**NEW DATA ON THE BLOODSUCKING MIDGE (DIPTERA, CERATOPOGONIDAE) OF THE COASTAL ZONE OF THE MARITIME TERRITORY.**

K S Iuanov V M Glukhova

*Entomol Rev* 46(4,OCT-DEC):478-481

Dec 1967 421 R322AE

Catalogs, Ceratopogonidae, Insect taxonomy, Insect vectors, Japanese encephalitis virus. Russian journal pp. 808-813

**22152-68**  
**PURINA POULTRY WORMING TABLETS. DRUGS FOR VETERINARY USE; DRUG EFFICACY STUDY IMPLEMENTATION.**

H L Ley

*Fed Regist* 33(240):18409-18410

11 Dec 1968 L1.451

Biochemistry, Chemical control (nematodes), Drug therapy, Nematodes, Poultry, Veterinary medicine.

**22153-68**  
**LICE OF POULTRY.**

*Agr Gaz New S Wales* 78(PT 3):178-180

Mar 1967 23 N472

Chemical control (insects), Dipping, Dusting, Fumigants, Mallophaga, Poultry, Spraying.

Methods for the eradication of poultry lice to increase egg production and reduce weight loss in chickens are discussed.

**22154-68**  
**THE PASTURE FLY (DIPTERA) FAUNA ASSOCIATED WITH CAMELS IN SOUTH TUVA.**

Ye A Pridantseva

*Entomol Rev* 46(4,OCT-DEC):491-494 REF

Dec 1967 421 R322AE

Camels, Catalogs, Demography, Diptera, Insect vectors. Russian journal pp. 827-834

**22155-68**  
**CONTROL OF THE HAMSTER PEST. (GE)**

O Schreier

*Pflanzenarzt* 21(5):69-70

01 May 1968 464.9 P482

Biochemistry, Carbon monoxide, Earthworms, Gases, Hamsters, Hibernation, Insect pests, Phosphorus compounds, Plant injuries, Spraying.

**22156-68**  
**HOW TO GET RID OF ECTOPARASITES OF POULTRY.**

B P Srivastava V P Sharma

*Indian Farming* 16(1):20-23

Apr 1966 22 IN283

Acarina, Argas persicus, Chemical control (insects), Lindane, Malathion, Mallophaga, Parasitic insects, Poultry, Siphonaptera.

**22157-68**  
**SYNANTHROPIC DIPTERA OF THE GENERA DASYPHORA R. D. AND MORELLIA R. D. (DIPTERA, MUSCIDAE) IN SOVIET CENTRAL ASIA.**

V I Sychevskaya

*Entomol Rev* 46(4,OCT-DEC):482-490 REF

Dec 1967 421 R322AE

Catalogs, Insect biology, Insect taxonomy, Insect vectors, Muscidae, Zoogeography. Russian journal pp. 814-826.

**22158-68**  
**NEW RESTRICTIONS ON USE OF DDT.**

F B Thompson

*New Zeal J Agr* 114(6):53

Jun 1967 23 N48J

## LIVESTOCK PROTECTION

22159-68

Chemical control (insects), DDT, Insecticide residues, Legislation.

Permits for DDT use in New Zealand are restricted during May, June and July. Specifications for its use around livestock are given.

## PARASITES

22159-68

BIOLOGICAL INVESTIGATIONS ON THE CESTODE, RAILLIETINA (R.) LOEWENI BARTEL AND HANSEN, 1964.

M H Bartel M F Hansen

*Amer Microscop Soc Trans* 86(1):9-15

Jan 1967 440.9 AM33

Biology, Cestoda, Formicidae, Insect vectors, Rabbits, Raillietina.

22160-68

INFLUENCE OF HAEMONCHOSIS ON NUTRITIONALLY INDUCED KETOSIS IN SHEEP.

D G Bennett S D Van Dewark H D Jackson

*Amer J Vet Res* 29(12):2315-2324

Dec 1968 41.8 AM3A

Animal nutrition, Haemonchosis, Haemonchus contortus, Ketosis, Sheep.

22161-68

DIFFUSION CHAMBERS FOR INDUCING IMMUNITY TO TRICHINELLA SPIRALIS IN MICE.

D D Desponmier B S Wostmann

*Exp Parasitol* 23(2):228-233 REF

Oct 1968 436.8 EX7

Antigens, Diffusion, Immunization, Metabolism, Mice, Trichinella spiralis.

22162-68

RECOVERY OF PORCINE LIVER FROM DAMAGE CAUSED BY MIGRATING X-RADIATED AND NONIRRADIATED LARVAE OF ASCARIS SUUM.

D L Ferguson C A Mebus M J Twiehaus

*Amer J Vet Res* 29(2):233-243

Feb 1968 41.8 AM3A

Ascaris, Larvae, Liver diseases, Swine, X-rays.

22163-68

INTERNAL PARASITES IN SHEEP ON THE NORTHERN TABLELANDS.

A N A Harris

*Agr Gaz New S Wales* 78(PT 2):80-84

Feb 1967 23 N472

Animal nutrition, Cestoda, Coccidiosis, Drug therapy, Nematodes, Sheep, Trematoda.

22164-68

INFLUENCE OF DIFFERENT FORMS OF MANAGEMENT ON THE INCIDENCE OF HELMINTH PARASITISM IN POULTRY.

M Z Hussain

*Pakistan J Sci* 19(3):114-117 REF

May 1967 475 P172

Biometry, Cestoda, Nematodes, Poultry farm management, English abstract

22165-68

OPISTHORCHIASIS IN SWINE. (RUM)

A Igritan

*Rev Zootech Med Vet* 17(12):64-66

Dec 1967 49 P943

Dierocoelium, Opisthorchis, Pancreas, Seminal vesicles, Swine.

22166-68

IMMUNOLOGICAL UNRESPONSIVENESS TO HELMINTH PARASITES: I. THE PATTERN OF NIPPOSTRONGYLUS BRASILIENSIS INFECTION IN YOUNG RATS.

E E Jarrett W F H Jarrett G M Urquhart

*Exp Parasitol* 23(2):151-160 REF

Oct 1968 436.8 EX7

Helminthiasis, Immunization, Life cycle, Nippostrongylus brasiliensis, Rats.

## BIBLIOGRAPHY

22167-68

A NEW NEMATODE PARASITE ANCYLOSTOMA SINDHENSIS (ANCYLOSTOMIDAE: STRONGYLOIDEA) FROM INTESTINE OF THE COMMON STRIPED SQUIRREL, FUNAMBULUS PENNANTI ARGENTESCENS WROUGHTON, FROM LOWER SIND.

Z Khanum

*Pakistan J Sci* 19(3):105-108

May 1967 475 P172

Ancylostomatidae, Squirrels, Taxonomy.

22168-68

L-LYSINE CARBOXYLYASE IN ASCARIS LUMBRICOIDES AND MONIEZIA EXPANSA.

J Lopez-George M Monteoliva F Mayor

*Exp Parasitol* 23(2):129-133 REF

Oct 1968 436.8 EX7

Ascaris lumbricoides, Biochemistry, Cestoda, Enzymes, Lysine decarboxylase, Metabolism, Moniezia.

22169-68

SUMMARY OF THE COPROLITIC ANALYSES OF ANIMAL STRONGYLOSIS; RESULTS OBTAINED IN MEUTHE-ET-MOSELLE. (FR)

F Lundy

*Nancy Univ Fac Pharm Ass Diplomes Microbiol*

*Bull* 110(2ND TRIMESTER):18-24

1968 448.2 N152

Cattle, Epizootic diseases, Sheep, Strongylosis.

22170-68

CARBON TETRACHLORIDE INJECTIONS FOR LIVER FLUKE CONTROL.

W J Perrett

*Agr Gaz New S Wales* 78(PT 3):158-159

Mar 1967 23 N472

Carbon tetrachloride, Cattle, Fasciola, Injections, Muscles, Sheep.

The effects of carbon tetrachloride injections in cattle and sheep for liver fluke control are discussed.

22171-68

SOME ASPECTS OF NUTRITION IN PARASITES.

C P Read

*Amer Zool* 8(1):139-149 REF

Feb 1968 410 AM3

Absorption, Digestion, Fasciola, Feeding, Nematodes, Nutrition, Physiology, Trichuris.

The nutrition of nematodes and trematodes as animal parasites is discussed in relation to food getting mechanisms which fall into three adaptive types, mechanical, internal digestive and absorption.

22172-68

OXYGEN CONSUMPTION IN ADULT ECHINOSTOMA REVOLUTUM.

J L Taft B Fried

*Exp Parasitol* 23(2):183-186

Oct 1968 436.8 EX7

Benzidine test, Chickens, Cyanides, Cytochrome oxidase, Echinostoma, Hemoglobin, Oxygen, Physiology, Trematoda.

22173-68

ELECTRON MICROSCOPE STUDIES OF FASCIOLA HEPATICA. VI. THE ULTRASTRUCTURAL LOCALIZATION OF PHOSPHATASES.

L T Threadgold

*Exp Parasitol* 23(2):264-276 REF

Oct 1968 436.8 EX7

Enzymes, Fasciola, Gastrointestinal system, Histochemistry, Lysosomes, Phosphatases, Physiology, Plasma membrane.

22174-68

SEASONAL INCIDENCE AND BIONOMICS OF SOME COMMON GASTROINTESTINAL NEMATODE LARVAE OF SHEEP AND GOATS.

J C Tripathi

*Agra Univ J Res Sci* 16(PT 1):179-181

Jan 1967 513 AG8

Biology, Cooperia, Epizootic diseases, Goats, Nematodes, Oesophagostomum, Sheep, Strongyloides.

22175-68

FURTHER OBSERVATIONS ON CAPILLARIA FELISCATI INFECTIONS IN THE CAT.

A H Waddell

*Australian Vet J* 44(1):33-34 REF

Jan 1968 41.8 AU72

Animal histology, Autopsies, Capillaria, Cats, Nematodiasis.

22176-68

EPIDEMIOLOGY OF HELMINTH INFESTATION OF BEEF CATTLE IN CENTRAL QUEENSLAND.

R Winks

*Australian Vet J* 44(8):367-372 REF

Aug 1968 41.8 AU72

Cattle, Epidemiology, Helminthiasis, Livestock diseases, Surveys.

## COMMODITY PROTECTION

### ARTHROPODS

22177-68

WHOLE GODOWN FUMIGATION IS ECONOMICAL AND SAFE.

G R Ghadiok

*Indian Farming* 16(8):25-27

Nov 1966 22 IN283

Carbon tetrachloride, Chemical control (insects), Ethylene dichloride, Grain, Insect control, Storage.

22178-68

OBSERVATIONS ON WOOD-DESTROYING INSECTS LIVING IN THE FOOTBRIDGE OVER SIKANEVA BOG.

K Loytyniemi

*Suomen Hyonteistieteellinen Aikakauskir Ann*

*Entomol Fenn* 33(4):260-264

20 Dec 1967 421 SU7

Catalogs, Insect ecology, Wood-destroying insects.

22179-68

CONTROL OF INSECTICIDE RESIDUES IN PRODUCE.

L J Matthews

*New Zeal J Agr* 114(4):30-32

Apr 1967 23 N48J

Agricultural products, Chlorinated hydrocarbons, DDT, Insecticide residues, Legislation.

Chlorinated hydrocarbon insecticide residues in farm produce are discussed as well as laws to insure that New Zealand's produce meets overseas standards. Alternative insecticides and their application are described.

### MICROBIAL CONTAMINATION

22180-68

THOUGHTS ON THE SALMONELLA PROBLEM. (GE)

J Bisehoff

*Arch Lebensmittelhyg* 19(4):83

Apr 1968 41.8 L49

Food contamination, Meat inspection, Meat packing industry, Salmonella, Slaughterhouses.

The international problem of Salmonella in slaughter houses is discussed. The organism enters East Germany by imported egg products and fodder. Inspection stations are suggested as well as studies on the chemistry and biology of the organism for better packing and storage of products.

22181-68

ON THE LEGAL CLASSIFICATION OF INSPECTED MEAT FROM SLAUGHTERED



# ANIMALS IN WHICH SALMONELLA WAS DETECTED. (GE)

E Martens

*Arch Lebensmittelhyg* 19(4):80-82 REF

Apr 1968 41.8 L49

Classification, Food contamination, Meat inspection, Salmonella, Slaughterhouses. German abstract

## ENVIRONMENTAL CONTAMINATION

22182-68

### THE EFFECTS OF AIR POLLUTION ON PLANTS AND SOIL.

53P, REF

1967 S602.A4A3

Air pollution, Fluorides, Plant injuries, Smog, Smoke, Soil contamination, Sulfur dioxide.

22183-68

### POISONING OF BEES BY INSECTICIDES.

*Agr Soc Trinidad Tobago J* 67(2):186

Jun 1967 8 T73

Apis mellifera, Demeton, Disulfoton, Formulations, Oxydemetonmethyl, Phorate, Poisoning, Spraying.

22184-68

### COMMONWEALTH OF AUSTRALIA DEPT OF HEALTH PUBLIC HEALTH BRANCH. PESTICIDES REVIEW.

*Australia Dep Health Pesticides Quart Suppl* 11P

Aug 1968 464.4 AU7

Carbamates, Herbicides, Organic compounds, Pesticides, Phosphorus, Reports, Research, Toxicology.

22185-68

### EFFECT OF SOIL TREATMENT WITH DISULFOTON (DISYSTON) GRANULAR UNDER LOW TEMPERATURE CONDITION. (JA)

M Nakata Y Ishino

*Jap J Appl Entomol Zool* 11(4):187-188

Dec 1967 475 J27

Disulfoton, Research, Soil testing, Temperature.

## RESIDUES

22186-68

### CONTRIBUTION TO THE KNOWLEDGE OF THE POSSIBLE INFLUENCE OF PESTICIDES ON GAME. (GE)

W Beck J Gebeshuber D Gesswagner E Glofke E

Kahl K Lebeda

*Pflanzenschutzberichte* 38(5/7):69-96 MAP REF

Jul 1968 464.9 P48

Game animals, Pesticide residues, Pesticides, Research, Tables (data), Toxicology. English summary.

22187-68

### THE FATE OF PARAQUAT IN SOILS.

A Calderbank T E Tomlinson

*Outlook Agr* 5(6):252-257 REF

1968 10 OU8

Herbicide residues, Metabolism, Nitrification, Paraquat, Soil adsorption, Soil microbiology.

22188-68

### A RELATIVE STUDY OF THE COMPOSITION AND TENACITY OF THE KARATHANE DEPOSITS ON BEAN LEAVES. (FR)

A Copin

*Gembloux Inst Agron Etat Bull* 3(2):261-269

1968 105.1 G285

Adhesives, Beans, Dinocap, Humidity, Pesticide residues. English abstract

22189-68

### TOLERANCES AND EXEMPTIONS FROM TOLERANCES FOR PESTICIDE CHEMICALS IN OR ON RAW AGRICULTURAL COMMODITIES. METHOXYCHLOR.

R E Duggan

*Fed Regist* 33(240):18372

11 Dec 1968 L1.451

Agricultural products, Chemicals, Methoxychlor, Pesticide residues, Pesticides, Potatoes.

22190-68

### TOLERANCES AND EXEMPTIONS FROM TOLERANCES FOR PESTICIDE CHEMICALS IN OR ON RAW AGRICULTURAL COMMODITIES. DIPHENAMID.

R E Duggan

*Fed Regist* 33(236):18090

05 Dec 1968 L1.451

Agricultural products, Biochemistry, Diphenamid, Herbicide residues, Meat, Milk, Pesticides, Potatoes.

22191-68

### PRODUCTION OF ANTIBODIES AGAINST INSECTICIDE--PROTEIN CONJUGATES.

G J Haas E J Guardia

*Soc Exp Biol Med Proc* 129(2):546-551

Nov 1968 442.9 SO1

Antibodies, DDT, Malathion, Rabbits, Serological tests.

22192-68

### METHOXYCHLOR RESIDUES IN THE MEAT AND MILK OF CATTLE FOLLOWING LIMITED APPLICATIONS OF METHOXYCHLOR FOR THE CONTROL OF BUFFALO FLY (HAEMATOBIA EXIGUA).

I S Hurwood

*Australian Vet J* 44(8):377-381 REF

Aug 1968 41.8 AU72

Cattle, Insecticide residues, Meat, Methoxychlor, Milk.

22193-68

### FACTORS INFLUENCING THE PERSISTENCE OF THE HERBICIDE 2,6-DICHLOROBENZONITRILE IN VARIOUS SOIL TYPES. (IT)

G Petrosini F Tafuri M Businelli

*Agrochimica* 12(5):422-436 REF

Aug 1968 385 AG84

Chromatography, Dichlobenil, Herbicide residues, Soil series. English, French, German, and Spanish abstracts

22194-68

### FOOD ADDITIVES PERMITTED IN FOOD FOR HUMAN CONSUMPTION ARSENIC.

W B Rankin

*Fed Regist* 33(242):18487

13 Dec 1968 L1.451

Arsenic, Chickens, Eggs, Food additives, Food consumption, Pesticide residues, Tissues, Toxicology, Turkeys.

## TOXICOLOGY

22195-68

### NERVE GAS: DUGWAY ACCIDENT LINKED TO UTAH SHEEP KILL.

P M Boffey

*Science* 162(3861):1460-1464

27 Dec 1968 470 SC12

Chemicals, Food contamination, Gases, Mortality, Nervous system, Research, Sheep, Toxicology.

22196-68

### GRAZING. CONTROL OF NOXIOUS PLANTS ON LAND UNDER CONTROL OR JURISDICTION OF FEDERAL GOVERNMENT.

O L Freeman

*Fed Regist* 33(241):18440

12 Dec 1968 L1.451

Animals, Chemical control (weeds), Grazing, Livestock diseases, Poisonous plants, Public lands.

22197-68

### PESTICIDES AND WATER. TD427.P38G3. (fr)

M A Gamrasni

*15P REF ASSOCIATION FRANCAISE POUR L'ETUDE DES EAUX*

Jan 1968

Accident prevention, Aquatic animals, Pesticides, Public health, Toxicology, Water. This article is an extract from the periodical, Water, Dec. 1967- Jan. 1968.

22198-68

### PHALARIS CAN BE POISONOUS.

J S Healey

*Agr Gaz New S Wales* 78(PT 2):91-93

Feb 1967 23 N472

Cobalt, Nervous system, Phalaris tuberosa, Poisonous plants, Sheep, Toxicology.

Weather and soil conditions which cause pasture plants to become toxic to sheep in Australia are discussed and precautions are given.

22199-68

### LABORATORY AND FIELD TRIALS WITH A NEW RATICIDE SELECTIVE TOXIC FOR RATS.

E Radova V Rupes M Privora

*J Hyg Epidemiol Microbiol Immunol* 12(3):365-369

1968 448.8 J826

Baits, Biochemistry, Chemical control (pests), Food, Laboratory animals, Rats, Toxicology. French, German, and Spanish summaries.

22200-68

### A PROPOSED METHOD FOR EVALUATION OF WETTING AGENTS ON ORGANIC AMENDMENTS USED IN HORTICULTURE. (ABSTRACT).

R Sheldrake O A Matkin

*Hortscience* 3(2,SUMMER):104

1968 SB1.H6

Lolium, Organic compounds, Peat, Research, Surface-active agents, Toxicology.

## PLANT PHYSIOLOGY & BIOCHEMISTRY

22201-68

### ROLE OF TRACE ELEMENTS IN THE GROWTH AND MORPHOLOGY OF FIVE ASCOSPORIC ASPERGILLUS SPECIES.

V P Agnihotri

*Can J Bot* 45(1):73-79 REF

Jan 1967 470 C16C

Aspergillus, Fungi, Micronutrients, Morphology, Plant physiology.

22202-68

### CHEMICAL DISINFECTION OF THE SOIL THROUGH METHYLBROMIDE. (GE)

C V Assche A Vanachter H V D Broeck

*Z Pflanzenkrankh (pflanzenpathol) Pflanzenschutz* 75(7):394-401

Jul 1968 464.8 Z3

Botrytis cinerea, Chemical control (plant diseases), Chloropicrin, Fungicides, Fusarium oxysporum, Methyl bromide, Soil fumigation, Soil moisture. English and French summaries

22203-68

### SOME EFFECTS OF DDT, DIELDRIN, DIMETHOATE AND FENTHION ON GROWTH OF CUCUMBERS.

B R Champ

*Queensland J Agr Anim Sci* 23(2):333-335

Jun 1966 23 Q37

Cucumbers, Dieldrin, Dimethoate, DDT, Fenthion, Plant physiology.

22204-68

22204-68

TESTS OF THE FLIGHT AGAINST THE 'MELTING OF SEED' OF SUMMER ONIONS IN NORD FINISTERE. (FR)

G Cherblanc

*Phytoma* 19(193):26-29

Dec 1967 464.8 P563

Botrytis squamosa, Drug therapy, Fungi, Fungicides, Pesticides, Research, Seedlings, Sodium.

22205-68

EFFECT OF PROMETRYNE ON GROWTH OF FUSARIUM OXYSPORUM F. SP. VASINFECTUM IN SOIL CULTURE. (ABSTRACT).

B K Chopra E A Curl R Rodriguez-Kabana

*Phytopathology* 58(6):72L-727

Jun 1968 464.8 P56

Biochemistry, Fusarium oxysporum vasinfectum, Plant physiology, Prometryne.

22206-68

FUNGAL DETOXICATION-IX. METABOLISM OF 1-NAPHTHALENEACETIC ACID BY ASPERGILLUS NIGER VAN TIEGH.

D K Clifford D Woodecock

*Phytochemistry* 7(9):1499-1502

Sep 1968 450 P5622

Aspergillus niger, Biochemistry, Chromatography, Fungi, Metabolism, Metabolites, Naphthaleneacetic acid, 1-, Research, Toxicology.

22207-68

GROWTH RESPONSES OF SOME COMMON PEANUT MYCOFLORA TO VARIOUS EXTRACTS FROM PEANUT SEED. (ABSTRACT).

B Doupnik D K Bell

*Phytopathology* 58(6):727

Jun 1968 464.8 P56

Agar, Fungi, Peanuts, Plant extracts, Plant physiology, Sclerotium rolfsii, Seeds.

22208-68

STIMULATION BY 2,4-D AND 2,4-D PLUS FE EDTA OF 32P UPTAKE BY BEAN SEEDLINGS (PHASEOLUS VULGARIS).

H M Etter

*Can J Bot* 45(4):535-537 REF

Apr 1967 470 C16C

Absorption, Beans, Biochemistry, D, 2,4-, Ethylenediaminetetraacetic acid, Iron, Isotopes, Phosphorus, Plant physiology, Seedlings.

22209-68

UREDOSPORE PRODUCTION OF FIVE RACES OF PUCCINIA RECONDITA ROB. EX DESM. AS AFFECTED BY LIGHT AND TEMPERATURE.

Z Eyal J L Peterson

*Can J Bot* 45(4):537-540

Apr 1967 470 C16C

Fungi, Light, Plant physiology, Puccinia recondita, Temperature, Uredosporcs.

22210-68

EJECTION AND DISSEMINATION OF ASCO-SPORES OF HYPOXYLON PRUINATUM.

J D Froyd D W French

*Can J Bot* 45(9):1507-1517 REF

Sep 1967 470 C16C

Ascospores, Hypoxylon pruinatum, Plant physiology, Reproduction, Seed dissemination.

22211-68

THE USE OF POLYACRYLAMIDE GEL DISC ELECTROPHORESIS IN DELIMITING THREE SPECIES OF PHYTOPHTHORA.

H S Gill D Powell

*Phytopathol Z* 63(1):23-29 REF

Sep 1968 464.8 P562

Acrylamide, Biochemistry, Electrophoresis, Fungi, Gels, Phytophthora, Proteins. German summary.

22212-68

PRODUCTION OF PECTIC AND CELLULYTIC ENZYMES BY PHYTOPHTHORA INFESTANS DE BY. I. CULTURE OF THE FUNGUS IN A NUTRIENT SOLUTION. (GE)

F Grossmann

*Phytopathol Z* 62(4):371-382 REF

Aug 1968 464.8 P562

Cellulase, Culture media, Enzymes, Fungi, Nutrient solutions (plants), Pectins, Phytophthora infestans, Research. English summary.

22213-68

ESTRADIOL ANNULMENT OF STEROL-INDUCED SEXUAL REPRODUCTION BY PYTHIUM PERIPLOCUM. (ABSTRACT).

J W Hendrix

*Phytopathology* 58(6):728

Jun 1968 464.8 P56

Estradiol, Plant physiology, Plant reproduction, Pythium periplocum, Sterols.

22214-68

ANATOMY OF BEADS ON FLAGELLA OF ZOOSPORES OF PHYTOPHTHORA MEGASPERMA VAR. SOJAE.

H H Ho K Zachariah C J Hickman

*Can J Bot* 45(9):1765-1766

Sep 1967 470 C16C

Anatomy, Flagella, Fungi, Phytophthora megasperma, Plant physiology, Zoospores.

22215-68

THE EFFECTS OF INDOLEACETIC ACID AND 2,4-DICHLOROPHENOXYACETIC ACID ON INTERMEDIARY METABOLISM OF 14C-LABELLED ORGANIC ACIDS BY PEA ROOT TIPS.

W K Kim R G S Bidwell

*Can J Bot* 45(10):1789-1796 REF

Oct 1967 470 C16C

Biochemistry, Carbon, D, 2,4-, Indoleacetic acid, Isotopes, Metabolism, Organic compounds, Peas, Plant physiology, Roots.

22216-68

THE EFFECTS OF INDOLEACETIC ACID AND 2,4-DICHLOROPHENOXYACETIC ACID ON THE UPTAKE AND METABOLISM OF 14C-GLUCOSE AND ON THE INCORPORATION OF 14C-LABELLED AMINO ACIDS INTO PROTEIN IN PEA ROOT TIPS.

W K Kim R G S Bidwell

*Can J Bot* 45(9):1751-1760 REF

Sep 1967 470 C16C

Amino acids, Biochemistry, Carbon, D, 2,4-, Glucose, Indoleacetic acid, Metabolism, Peas, Plant hormones, Plant physiology, Proteins.

22217-68

INTERACTION OF TEMPERATURE AND GIBBERELLIN ON POTATO SEED GERMINATION.

S L Lam

*Amer J Bot* 55(2):193-198 REF

Feb 1968 450 AM36

Gibberellins, Potato seeds, Seed germination, Temperature.

22218-68

LIGHT AND TEMPERATURE EFFECTS ON GROWTH AND SPOROPORE FORMATION OF LENZITES TRABEA.

C Madhosingh

*Can J Bot* 45(4):525-530

Apr 1967 470 C16C

Fungi, Lenzites trabea, Light, Plant physiology, Temperature.

22219-68

RESPIRATORY AND ENZYMIC STUDIES WITH VERTICILLIUM ALBOATRUM FROM COTTON.

I Malca D C Erwin J J Sims M Long B Jones

*Phytopathology* 58(3):348-353

Mar 1968 464.8 P56

Arsenates, Arsenites, Azides, Cotton, Dinitrophenol, 2,4-, Enzymes, Fluorides, Fungus diseases (plants), Iodoacetate, Oxygen, Plant respiration, Verticillium albo-atrum.

22220-68

DEVELOPMENT AND SPORULATION OF POLYPORUS HISPIDUS. (ABSTRACT).

F I McCracken E R Toole

*Phytopathology* 58(6):730

Jun 1968 464.8 P56

Fungus diseases (plants), Plant physiology, Polyporus hispidus, Quercus phellos, Spores.

22221-68

METABOLISM OF SPORULATION IN FILAMENTOUS FUNGI. I. GLUCOSE AND ACETATE OXIDATION IN SPORULATING AND NONSPORULATING CULTURES OF ENDOTHIA PARASITICA.

L L McDowell A A De Hertogh

*Can J Bot* 46(4):449-451 REF

Apr 1968 470 C16C

Acetates, Biochemistry, Endothia parasitica, Fungi, Glucose, Metabolism, Reproduction, Research.

22222-68

PERIODICITY IN AECIOSPORE RELEASE IN GYMNASPORANGIUM JUNIPERI-VIRGINIANAE.

S M Pady C L Kramer R Clary

*Phytopathology* 58(3):329-331

Mar 1968 464.8 P56

Apples, Diurnal rhythm, Fungus diseases (plants), Gymnosporangium juniperi-virginianae, Plant physiology, Rust.

22223-68

EXPERIMENTS ON THE PRECOCIOUS FLOWERING OF WESTERN RED CEDAR AND FOUR SPECIES OF CUPRESSUS WITH GIBBERELLINS A3 AND A4/A7 MIXTURE.

R P Pharis W Morf

*Can J Bot* 45(9):1519-1524

Sep 1967 470 C16C

Cupressus, Flowers, Gibberellic acid, Gibberellin a4, Gibberellin a7, Plant biochemistry, Plant physiology, Research, Thuja plicata.

22224-68

EFFECT OF TRICHODERMA VIRIDE ON SACCHARASE ACTIVITY AND GROWTH OF SCLEROTIUM ROLFII IN MIXED SOIL CULTURE. (ABSTRACT).

R Rodriguez-Kabana E A Curl

*Phytopathology* 58(6):730-731

Jun 1968 464.8 P56

Culture media, Fungi, Invertase, Plant physiology, Sclerotium rolfsii, Soil-borne plant diseases, Trichoderma viride.

22225-68

THE INTERACTION OF THE SEED COAT AND GIBBERELIC ACID IN THE GERMINATION OF DATURA FEROX L.

R A Sanchez A Soriano S Slabnik

*Can J Bot* 45(3):371-376

Mar 1967 470 C16C

Biochemistry, Datura ferox, Gibberellic acid, Plant physiology, Seed coats, Seed germination.

22226-68

EFFECT OF PRETREATMENT OF PINE SEEDS WITH HERBICIDES ON SEED GERMINATION AND GROWTH OF YOUNG SEEDLINGS.

S Sasaki T T Kozlowski J H Torrie

*Can J Bot* 46(3):255-262 REF

Mar 1968 470 C16C

Biochemistry, Herbicides, Pinus resinosa, Plant physiology, Preventive medicine, Seed germination, Seeds.

22227-68

M-N-ETHYLAMINOBENZOIC ACID: ABSENCE OF PHYTOXIC ACTIVITY.

A Stoessl A N Starratt

*Can J Bot* 45(9):1769-1770

Sep 1967 470 C16C

Biochemistry, Lettuce, Plant physiology, Soils, Toxicology.

22228-68

AN ELECTRON MICROSCOPE STUDY OF INTRAVACUOLAR BODIES IN THE UREDIA OF WHEAT STEM RUST AND IN HYPHAE OF OTHER FUNGI.

P L Thomas P K Isaac

*Can J Bot* 45(9):1473-1478



Scp 1967 470 C16C

Electron microscopes, Fungi, Hyphae, Plant physiology, Research, Stem rust (wheat), Uredia.

22229-68

THE INFLUENCE OF PHOSPHATE ON THE PHYTOTOXICITY OF 3-AMINO1,2,4-TRIAZOLE.

M R Vega

*Philippine Agr* 51(5):349-396 REF

Oct 1967 25 P542

Amitrole, Biochemistry, Phosphates, Toxicology.

22230-68

GUIDING EXPERIMENTS CONCERNING THE INFLUENCE OF HERBICIDES ON THE SPICULE DEVELOPMENT OF SPRING BARLEY AFTER APPLICATIONS. (GE)

G Weigand

*Gesunde Pflanzen* 20(4):69,70,72,74

Apr 1968 464.8 G33

Barley, Biochemistry, Chemical control (weeds), Crop yields, Herbicides, Pesticide application, Plant morphology, Research, Tables (data).

22231-68

NEW DIRECTIONS IN VIRUS CONTROL IN VEGETABLE AND POTATO CULTIVATION. (GE)

H Wenzl

*Pflanzenarzt* 20(12):149

01 Dec 1967 464.9 P482

Aphis gossypii, Biochemistry, Chemical control (plant diseases), Insect vectors, Mineral oil, Mosaic (cucumbers), Myzus persicae, Potatoes, Spraying, Vegetables, Virus diseases (plants), Virus y (potatoes).

22232-68

CARBON DIOXIDE EFFECTS ON FRUITS. III. THE FIXATION OF C1402 IN LEMON IN AN ATMOSPHERE ENRICHED WITH CARBON DIOXIDE.

R E Young J B Biale

*Planta* 81(3):253-263 REF

1968 450 P693

Biochemistry, Carbon dioxide, Citric acid, Fruit, Lemons, Plant physiology.

## CHEMISTRY

22233-68

EFFECT OF DEXTROSE IN MEDIUM FOR THE PREPARATION OF MYCOPLASMA GALLISEPTICUM PLATE ANTIGENS.

H E Adler A J DaMassa

*Appl Microbiol* 16(4):558-562

Apr 1968 448.3 AP5

Agglutination, Chemistry, Culture media, Glucose, Microbiology, Mycoplasma gallisepticum.

22234-68

POLAROGRAPHY OF TRACE DOSES OF KARATHANE. (FR)

A Copin

*Gembloux Inst Agron Etat Bull* 3(2):254-260

1968 105.1 G285

Dinocap, Pesticide residues, Polarography, Vegetables. English abstract

This study demonstrates the possibility of direct extraction of Karathane traces by means of supporting electrolyte Acetone / Acetic Acid buffer recommended for polarographic dosage.

22235-68

ANTIFUNGAL ACTIVITY OF ISOTHIOCYANATES AND RELATED COMPOUNDS III. DERIVATIVES OF DIPHENYL, STILBENE, AZOBENZENE, AND SEVERAL POLYCONDENSED AROMATIC HYDROCARBONS.

L Drobnica M Zemanova P Nemec K Antos P

Kristian A Martvon

*Appl Microbiol* 16(4):582-587 REF

Apr 1968 448.3 AP5

Azobenzene, Chemistry, Diphenyl, Fungicides, Hydrocarbons, Isothiocyanates, Stilbene.

22236-68

THE INFLUENCE OF SOME ELECTROLYTES ON THE ABSORPTION AND RELEASE OF TRIAZINES ON SOME ORGANIC COLLOIDS. (IT)

P Fusi R Corsi

*Agrochimica* 12(2-3,FEB-APR):109-119 REF

Apr 1968 385 AG84

Absorption, Atrazine, Chemistry, Colloids, Electrolytes, Prometryne, Simazine. English, French, German, and Spanish abstracts

22237-68

STUDIES ON EFFECTIVENESS OF SUSPENSIBILITY WITH PREPARATION TECHNIQUE OF W.P. FORMULATIONS. (TU)

S Ozturk N Simsir

*Bitki Koruma Bulteni* 7(4):188-192

1967 464.8 B542

Chemistry, Methodology, Research, Water. German summary

22238-68

PARTIAL HYDROLYSIS OF DIELDRIN BY AEROBACTER AEROGENES.

G Wedemeyer

*Appl Microbiol* 16(4):661-662

Apr 1968 448.3 AP5

Aerobacter aerogenes, Biochemistry, Chromatography, Dieldrin, Hydrolysis.

## ENGINEERING

22239-68

MIST SPRAYERS FOR APPLYING INSECTICIDES OF LOW VOLUME. (POR)

P R Almeida L F Fontes

*Biologico* 34(10):224-225

Oct 1968 442.8 B529

Insecticide application, Pastures, Spraying equipment.

## INDUSTRY

22240-68

PROGRAM-ABSTRACTS, 65TH ANNUAL MEETING, AMERICAN SOCIETY FOR HORTICULTURAL SCIENCE.

*Hortscience* 3(2,SUMMER):79-138

1968 SB1.H6

Agricultural outlook, Histology, Reports, Research.

## ECONOMICS

22241-68

PESTICIDES IN WATER. AMITROLE CONCENTRATIONS IN CREEK WATERS DOWNSTREAM FROM AN AERIALY SPRAYED WATERSHED SUB-BASIN.

R B Marston D W Schults T Shiroyama L V

Snyder

*Pest Mont J* 2(3):123-128

Dec 1968 S0B951.0A10P41

Aerial spraying, Amitrole, Herbicides, Laboratories, Pesticides, Research, Water analysis.

## EDUCATION

22242-68

ORGANIZING AGRICULTURAL RESEARCH TO ASSIST DEVELOPING COUNTRIES.

F F Hill

*Entomol Soc Amer Bull* 14(2):121-124

Jun 1968 423.9 EN8

Agricultural research, Food supply, Laboratories, Supply and demand.





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California University, Davis; Dept of Epidemiology and Preventive Medicine  
21766
- Adler, H E**  
California University, Davis; Dept of Epidemiology and Preventive Medicine  
22233
- Afscharpour, F**  
Pflanzenschutzamt des Landes, Schleswig-Holstein; Bezirksstelle Rellingen  
21767
- Afscharpour, F**  
Pflanzenschutzamt des Landes Schleswig-Holstein, Rellingen; Bezirksstelle für pflanzenschutz  
21958
- Agnihotri, V P**  
Forest Research Lab., Maple, Ontario, Canada; Southern Research Station  
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- Allen, W R**  
Canada Dept. of Agriculture, Vineland Station, Ontario; Research Station  
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- Allen, W R**  
Canada Dept. of Agriculture, Vineland Station, Ontario; Research Station  
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- Allison, A C**  
National Inst. for Medical Research, Millhill, London, England; Clinical Research Centre Lab.  
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- Almeida, P R**  
Instituto Biologico, Sao Paulo; Seccao de Insetos  
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- Amer, S**  
National Research Center, Cairo, United Arab Republic  
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Louisiana State Univ. and Agricultural and Mechanical Coll; Baton Rouge  
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- Anderson, W W**  
Yale Univ., New Haven, Conn.; Dept. of Biology  
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- Anghel, C G**  
Institutul agronomic Dr. Petru Groza, Cluj, Romania  
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- Angus, T A**  
Dept. of Forestry, Sault Ste. Marie, Ontario; Insect Pathology Research Institute  
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- Arnott, H J**  
Texas University, Austin; Cell Research Institute  
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- Ash, R J**  
Cincinnati Univ., Ohio  
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- Assche, C V**  
Katholieke Universiteit, Leuven, Belgium; Laboratorium für Pflanzenkrankheiten  
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- Audemard, H**  
Institut National de la Recherche Agronomique, Montfavet, France; Station de Zoologie Agricole  
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- Badiali, L**  
United Nations Development Programme, Cairo, Egypt; Near East Animal Health Inst.  
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- Bains, B S**  
Provincial traders Pty. Ltd., Murarrie, Australia  
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- Bakshi, B**  
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- Baldacci, E**  
Milano Univ., Italy; Inst. di Patologia Vegetale  
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Milano Univ., Italy; Inst. di Patologia  
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- Banks, C C**  
Department of Agriculture, Paeroa, New Zealand  
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Department of Primary Industries, Brisbane, Australia  
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Moorhead State Coll., Minn.; Dept. of Biology  
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National Inst. of Arthritis and Metabolic Diseases; Bethesda, Md.; Arthritis and Rheumatism Branch  
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- Barton, G M**  
Canada Dept. of Forestry and Rural Development, Vancouver 8; British Columbia; Forest Products Lab.  
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Canada Dept. of Agriculture, Ottawa; Cell Biology Research Inst.  
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Kansas University, Lawrence; Dept. of Entomology  
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Department of Agriculture, Thames, New Zealand  
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Ecole de Medecine, Geneva, Switzerland; Inst. de Physiologie  
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Animal Research Inst. Yeerongpilly, Australia; Dept. of Primary Industries  
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- Beaver, R A**  
North Wales Univ. Coll., Bangor, England; Dept. of Zoology  
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- Beck, W**  
Österreichische Stickstoffwerke, Linz; Biologisches Forschungslaboratorium  
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Canada Dept. of Agriculture, Ottawa; Cell Biology Research Inst.  
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- Behrens, H**  
Tiergesundheitsamt der Landwirtschaftskammer, Hannover, West Germany  
22051
- Behringer, P**  
Bayerischen Landesanstalt für Bodenkultur, Pflanzenbau; und Pflanzenschutz, München, West Germany; Nematodenstelle Neuburg a.d. Donau  
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- Belozarov, V N**  
Leningrad Univ., USSR; Dept. of Entomology  
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- Belyshev, B F**  
USSR Academy of Sciences, Irkutsk; Siberian Div.  
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- Benecke, F S**  
Department of Agriculture, Tamworth, Australia  
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- Bennett, D G**  
Purdue Univ., Lafayette, Ind.; Dept. of Veterinary Microbiology, Pathology, and Public Health  
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- Berg, L A**  
Tela Railroad Company, La Lima, Honduras; Division of Tropical Research  
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Darmstadt  
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- Berry, D M**  
Glaxo Laboratories Ltd., Greenford, Middlesex  
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Washington State Univ., Pullman  
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- Bieber, J**  
Deutschen Akademie der Wissenschaften, Berlin, East Germany; Institut für Mikrobiologie und Experimentelle Therapie; Jena  
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- Bischoff, J**  
Veterinaruntersuchungsanstalt der Freien und Hansestadt; Hamburg, Germany  
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- Bivin, W S**  
Fort Detrick, Frederick, Md.; Army Medical Unit  
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- Blagoveshchenskiy, D I**  
USSR Academy of Sciences, Leningrad; Inst. of Zoology  
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USSR Academy of Sciences, Novosibirsk; Siberian Div.  
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U. S. Dept. of Agriculture, College Station, Texas; Agricultural Research Service; Market Quality Research Division  
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Louisiana State Univ. and Agricultural and Mechanical Coll; Baton Rouge  
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Farbenfabriken Bayer A G, Leverkusen-Bayerwerk; Biologisches Institut  
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Inst. National de la Recherche Agronomique, Versailles, France; Station Centrale de Zoologie agricole  
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Department of Agriculture, Newcastle, Australia  
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Wisconsin Univ., Madison  
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Canada Dept. of Agriculture, Harrow, Ontario; Research Branch; Research Station  
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Georgia Experiment Station  
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York Univ., Toronto, Ontario, Canada; Dept. of Biology  
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Canada Dept. of Agriculture, Fredericton; Research Station  
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Division of Science Services, Murwillumbah, Australia  
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Manchester Museum, England; Dept. of Entomology  
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Ecole Nationale Veterinaire, Alfort, France  
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Department of Agriculture, Hamilton, New Zealand; Animal Health Div.  
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Department of Agriculture, Hamilton, New Zealand  
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Commonwealth and Scientific Industrial Research Organization, Tion, Canberra, Australia; Division of Entomology  
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Iowa State Univ., Ames; Dept. of Veterinary Microbiology and Preventive Medicine 22058
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Wisconsin University, Madison; Dept. of Plant Pathology 21584
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The Rockefeller Univ., N. Y., N. Y. 22161
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Connecticut Univ., Storrs; Microbiology Section 22075
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Landesanstalt fuer Bodenkultur, Pflanzenbau und Pflanzen; Schutz, Muenchen, West Germany; Gruppe Pflanzenschutz 21776
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Ungarischen Akademie der Wissenschaften, Martonvasar; Landwirtschaftlichen Forschungsinstitut 21966
- Douglas, R G**  
Baylor Univ. Coll. of Medicine, Houston, Texas; Dept. of Microbiology 22076
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Florida Gulf Coast Experiment Station, Bradenton 22207
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Stanford Univ. School of Medicine, Palo Alto, Calif.; Dept. of Pharmacology 21677
- Drobica, L**  
Slovak Polytechnical University, Bratislava, Czechoslovakia; Faculty of Chemistry; Dept. of Microbiology and Biochemistry 22235
- Dun, G S**  
Lowlands Agricultural Experiment Station, Keravat, New; Britain 21967
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The Rockefeller Univ., New York City, N. Y. 21757



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Hill, F F

- El Khalifa, M D**  
Northwestern Univ., Evanston, Ill.; Dept. of Biological Sciences  
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Gulf Coast Experiment Station, Bradenton, Florida  
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- Engelmann, M D**  
Michigan State Univ., East Lansing; Dept. of Natural Science  
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Instituto Nacional de Tecnologia Agropecuaria, Buenos Aires, Argentina; Estacion Experimental Agropecuaria La Consulta  
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- Etter, H M**  
Forest Research Lab., 132 9th Avenue S. W., Calgary, Alberta; Canada  
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Wisconsin Univ., Madison; Dept. of Botany  
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Rutgers Univ., New Brunswick, N. J.; Dept. of Plant Biology  
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Pennsylvania Univ., Philadelphia; Dept. of Clinical Studies  
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Department of Agriculture, Beltsville, Md.  
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Agricultural Research Service, Greenport, N. Y.; Plum Island Animal Disease Lab.  
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Nebraska Univ., Lincoln; Dept. of Veterinary Science  
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Tate and Lyle Central Agricultural Research Station, Waterloo Estate, Trinidad  
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Instituto Biologico, Sao Paulo, Brazil  
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U. S. Forest Service, Stoneville, Mississippi  
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Minnesota Univ., St. Paul; Dept. of Veterinary Medicine  
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Vanderbilt Univ. School of Medicine, Nashville, Tenn.; Dept. of Pediatrics  
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U. S. Army Natick Laboratories, Natick, Mass.; Pioneering Research Laboratory; Applied Entomology Group  
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Kentucky University, Lexington  
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Canada Dept. of Agriculture, Harrow, Ontario; Research Branch; Research Station  
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- Ford, W L**  
Oxford Univ., England; M. R. C. Cellular Immunology Research Unit  
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Arizona Univ., Mesa  
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Agricultural Research Service, Ames, Iowa; National Animal Research Lab.  
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Wisconsin Univ., Madison; Dept. of Botany  
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Washington State University, Pullman; Dept. of Entomology  
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Minnesota Univ.; Dept. of Plant Pathology  
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Glaxo Laboratories Ltd., Sefton Park, Stoke Poges, Bucks  
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- Fusi, P**  
Consiglio Nazionale delle Ricerche, Florence, Italy; Inst. di Chimica Agraria e Forestale  
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U. S. Dept. of Agriculture, State College, Mississippi; Agricultural Research Service  
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- Gagnon, C**  
Canada Dept. of Forestry and Rural Development, Sillery, Quebec; Forest Research Lab.  
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- Gamrasni, M A**  
Association Francaise pour L'etude des Eaux  
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Don Chemical Company  
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- Garner, J H B**  
Kentucky Univ., Lexington; Dept. of Botany  
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- Gaspar, C**  
Faculte des Sciences agronomique, Gembloux, Belgium; Lab. de Zoologie generale  
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- Gates, D W**  
Agricultural Research Service, Beltsville, Md.; Beltsville Parasitological Lab.  
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Department of Agriculture, Gosford, Australia  
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- George, J A**  
Canada Dept. of Agriculture, Ontario; Research Station  
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- Ghadiok, G R**  
Office of the Regional Director (Food), New Delhi, India  
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- Gibbs, G W**  
Victoria Univ., Wellington, New Zealand; Dept. of Zoology  
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- Gibson, F A**  
Department of Agriculture, Rydalmere, Australia; Div. of Science Services  
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- Gilbert, J C**  
Hawaii Univ., Honolulu  
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- Gill, C C**  
Canada Dept. of Agriculture, Winnipeg; Research Station  
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- Gill, H S**  
Illinois Univ., Urbana; Dept. of Plant Pathology  
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- Gilmer, R M**  
New York (Cornell) Agricultural Experiment Station, Geneva  
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- Giorgi, W**  
Instituto Biologico, Sao Paulo, Brazil  
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North Carolina State University, Raleigh  
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Cambridge Univ., England; School of Veterinary Medicine  
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Cambridge Univ., England; School of Veterinary Medicine  
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Maryland Univ., College Park; Dept. of Botany  
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- Green, D W**  
Michigan State Univ., East Lansing  
21779
- Greenup, L R**  
Department of Agriculture, Rydalmere, Australia; Div. of Science Services  
21973
- Greenup, L R**  
Department of Agriculture, Rydalmere, Australia; Div. of Science Services  
21974
- Greenup, L R**  
Department of Agriculture, Rydalmere, Australia; Div. of Science Services  
21975
- Greve, L**  
Bergen Univ., Norway; Zoological Museum  
21605
- Grosclaude, C**  
Institut National de la Recherche Agronomique, Pont-de-la-Maye, France; Station de Pathologie Vegetale du Sud-Ouest  
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- Grossman, F**  
Justus Liebig Giessen Univ., West Germany; Institut fur Phytopathologie  
21860
- Grossmann, F**  
Giessen Univ., Giessen, West Germany; Institut fuer Phytopathologie  
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- Gysin, H**  
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21780
- Haas, G E**  
Deerfield, 677 Deerpath Drive, Ill.  
21683
- Haas, G J**  
General Foods Corp., Tarrytown, N. Y.; Dept. of Corp. Research  
22191
- Hackman, R**  
Research Labs. of Medica Ltd., Helsinki, Finland  
21759
- Hadzistevic, D**  
Institut de Mais, Zemun, Yugoslavia  
21976
- Harris, A N A**  
Department of Agriculture, Armidale, Australia  
22163
- Hayes, D K**  
U. S. Department of Agriculture, Beltsville, Md.; Agriculture Research Service; Entomology Research Division  
21684
- Healey, J S**  
Department of Agriculture, Sydney, Australia  
22090
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Department of Agriculture, Sydney, Australia  
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Department of Agriculture, Sydney, Australia  
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- Healy, M J**  
Illinois University, Urbana; Dept. of Plant Pathology  
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Idaho Univ., Moscow; Dept. of Plant Sciences  
21862
- Hendrickson, J A**  
Kansas University; Dept. of Entomology  
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Kentucky University, Lexington  
22213
- Herr, R R**  
Upjohn Company, Kalamazoo, Mich.; Dept. of Microbiology  
21781
- Hess, F D**  
Michigan State Univ., East Lansing  
22015
- Hibbert, L E**  
Utah State Univ., Logan; Dept. Of Zoology  
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- Hill, A R**  
Glasgow Univ., Scotland; Dept. of Zoology  
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The Ford Foundation  
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- Hippa, H**  
Turku Univ., Finland; Dept. of Zoology 21608
- Hippa, H**  
Turku Univ., Finland; Dept. of Zoology 21609
- Hiratsuka, Y**  
Canada Dept. of Forestry and Rural Development, Calgary, Alberta; Forest Research Lab. 21863
- Ho, H H**  
University of Western Ontario, London, Canada; Dept. of Botany 21864
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Liverpool Univ., England; Dept. of Bacteriology 22092
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Michigan State University, East Lansing; Dept. of Entomology 21585
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U S Dept. of Agriculture, Wyndmoor, Pa.; Eastern Regional Laboratories 21866
- Hurpin, B**  
Institut National de la Recherche Agronomique, Versailles; Station de Recherches de Biocoenotique et de Lutte Biolo 21686
- Hurwood, I S**  
Department of Primary Industries, Yeerongpilly, Australia; Animal Research Inst. 22192
- Hussain, M Z**  
West Pakistan Veterinary Research Inst., Lahore; Parasitology Section 22164
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Oklahoma State Univ., Stillwater 21783
- Israel, P.**  
Central Rice Research Inst., Cuttack, India 21977
- Iuanov, K S**  
USSR Academy of Sciences, Leningrad; Inst. of Zoology 22151
- Iyer, P R K**  
Indian Veterinary Research Inst., Izatnagar, India 22095
- Jadot, R**  
Centrum voor Tabakonderzoek, Gembloux, Belgium 21867
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California Univ., Davis; Dept. of Clinical Pathology 22096
- James, I F**  
Agricultural Research Service, Logan, Utah; Animal Disease And Parasite Research Div. 22097
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Glasgow Univ., Scotland; Wellcome Labs. for Experimental Parasitology 22166
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Rutgers Univ., New Brunswick, N. J. 21868
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Bioveta, Terezin, Czechoslovakia 22098
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Manchester Museum, England 21610
- Johnson, C**  
Florida Univ., Gainesville; Dept. of Zoology 21760
- Johnson, R W**  
Agent Development and Engineering Lab., Frederick, Md. 22099
- Jones, B L**  
Lower Rio Grande Valley Research and Experiment Center, Weslaco, Texas 21869
- Jones, J C**  
Maryland University, College Park; Dept. of Entomology 21687
- Jones, R J**  
Birmingham Accident Hospital, England; M. R. C. Industrial Injuries and Burns Research Unit 21784
- Judenko, E**  
Fisons Pest Control Limited, Karen, Nairobi 21688
- Kabelik, V**  
State Veterinary Inst., Cesky Brod, Czechoslovakia 22100
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- Kado, C I**  
California University, Berkeley; Virus Laboratory 21871
- Kaiser, W**  
Frankfurt/Main 21786
- Kalra, A N**  
Indian Inst., of Sugarcane Research, Lucknow 21978
- Kamal, M**  
Agricultural Research Inst., Tandojam, West Pakistan 21872
- Kangas, E**  
Helsinki Univ., Finland; Dept. of Zoology 21691
- Kapoor, V C**  
Indian Agricultural Research Inst., New Delhi; Div. of Entomology 21612
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Agra College; Dept. of Zoology 21613
- Ke Riche, P D**  
Nicholas Inst., Sherbrooke, Victoria 22102
- Kedar, N**  
Hebrew Univ., Rehovot, Israel; Faculty of Agriculture 21873
- Kemper, A**  
Pflanzenschutzamt der Landwirtschaftskammer westfalen; Lippen, Munster 22005
- Kendrick, J W**  
California Univ., Davis 22103
- Khan, N R**  
Guelph Univ., Ontario, Canada; Dept. of Zoology 21614
- Khanum, Z**  
Karachi Univ., Pakistan; Dept. of Zoology 22167
- Khare, G P**  
Kansas State Univ., Manhattan; Dept. of Bacteriology 22104
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Department of Agriculture, Gosford, Australia 21874
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Patrice Lumumba Univ. of International Friendship, Moscow; Ussr; Dept. of Microbiology 22105
- Kim, K C**  
Minnesota University, St. Paul; Dept. of Entomology, Fisheries, and Wildlife 21615
- Kim, W K**  
Canada Dept. of Agriculture, Winnipeg, Manitoba; Research Station 22215
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Canada Dept. of Agriculture, Winnipeg, Manitoba; Research Station 22216
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Dalhousie Univ., Halifax, Nova Scotia; Dept. of Biology 21875
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Wisconsin Univ., Madison; Dept. OF Veterinary Science 22106
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Melbourne Univ., Australia; Dept. of Genetics 21692
- Kiraly, Z**  
Research Institute for Plant Protection, Budapest, India 21876
- Kiritani, K**  
Prefectural Institute of Agricultural and Forest Science; Nangoku, Kochi-Pref., Japan; Division of Entomology 21693
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Rothamsted Experimental Station, Harpenden, Herts, England 21877
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Kiev Univ., USSR; Arachnological-Entomological Lab. 21616
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Norwegian Forest Research Inst., Vollebakk, Norway 21694
- Knuhtsen, H K**  
Arizona University, Tucson; Dept. of Plant Pathology 21878
- Kobayashi, M**  
Sericultural Experiment Station, Wada, Suginami-ku, Tokyo 21695
- Kodama, K**  
Biken Laboratories, Incorporated, Kyoto, Japan 22107
- Koenig, K**  
Bayerische Landesanstalt fuer Bodenkultur, Pflanzenbau; und Pflanzenschutz, Muenchen, West Germany; Abteilung Praktischer Pflanzenschutz 21787
- Kooistra, E**  
Institute of Horticultural Plant Breeding, Netherlands 21879
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Nikitskiy Botanical Gardens, Yalta, USSR 21618
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Moscow State Univ., USSR; Dept. of Entomology 21619
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N. F. Gamaleya Institute for Epidemiology and Microbio; Logy, Moscow, Ussr 22108
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Purdue Univ., Lafayette, Ind.; Dept. of Entomology 21696
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Washington State Univ., Pullman; Dept. of Veterinary Microbiology 22109
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New Zealand Dept of Scientific and Industrial Research, Pa 21881



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Connecticut Univ., Storrs; Div. of Biological Sciences 21699
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Department of Agriculture, Christchurch, New Zealand 21882
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Connecticut University 21620
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Pacific Research Inst. of Fisheries and Oceanography; USSR; Kamchatka Div. 21621
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Agricultural Research Service, Salinas, Calif.; Crops Research Div. 21883
- Limbourg, P**  
Instut de la Recherche Scientifique dans L'Industrie; et L'Agriculture, Belgium 22016
- Lingard, D R**  
Washington State Univ., Pullman 22110
- Linzon, S N**  
Forest Research Lab., Maple, Ontario, Canada 21884
- Linzon, S N**  
Canada Dept. of Forestry, Maple, Ontario; Forest Research Lab. 21885
- Lopez-George, J**  
Instituto 'popez Neyra'de Parasitologia, Granada, Spain; Catedra de Bioquimica 22168
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Helsinki Univ., Finland; Dept. of Agricultural and Forest Zoology 22178
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Montana State Univ., Bozeman; Veterinary Research Lab. 22112
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Missouri University, Columbia; Dept of Biochemistry and Entomology 21700
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Newcastle University, England; Dept. of Agricultural Zoology 21623
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Pennsylvania State Univ., Univ. Park; Dept. of Plant Pathology 21886
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Laboratoire d'Analyses Veterinaires, Nancy, France 22169
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Canada Dept. of Agriculture, Fredricton, New Brunswick; Research Station 21624
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Canada Dept. of Agriculture, Ottawa; Plant Research Inst. 22218
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Western Australian Museum, Perth 21701
- Mainland, C M**  
Rutgers Univ., New Brunswick, N. J. 21790
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Kharkov Univ., USSR; Dept. of Entomology 21979
- Malca, I**  
California University, Riverside; Dept. of Plant Pathology 22219
- Mallach, N**  
Bayerische Landesanstalt fuer Bodenkultur, Pflanzenbau; und Pflanzenschutz, Muenchen, West Germany; Uberwachung und Pflanzenbeschau 22032
- Mamayev, B M**  
USSR Academy of Sciences, Moscow; Severtsov Inst. of Animal Morphology 21625
- Markkula, M**  
Agricultural Research Centre, Tikkurila, Finland; Dept. of Pest Investigation 21888
- Marrrou, J**  
Institut National de la Recherche Agronomique, Domaine; Saint-Maurice, Montfavet; Station de Pathologie Vegetale 21980
- Marston, R B**  
U S Dept of the Interior; Federal Water Pollution Control Administration; Pacific Northwest Water Laboratory 22241
- Martens, E**  
Staatlichen Veterinaruntersuchungsamt, Krefeld, Germany 22181
- Martens, J W**  
Canada Dept. of Agriculture, Winnipeg, Manitoba; Research Station 21889
- Mathur, L M L**  
Udaipur Univ., India; Agricultural Experiment Station 21702
- Mathur, M K**  
Central Arid Zone Research Inst., Jodhpur, India 22017
- Mathur, S B**  
Danish Government Institute of Seed Pathology for Develop; Ing Countries, 78 Ryvangs Alle, Hellerup-Copenhagen, Den; Mark 21890
- Matthews, L J**  
Ruakura Agricultural Research Centre, Hamilton, New Zealand 22179
- Mayer, H R**  
Landesanstalt fuer Bodenkultur, Muenchen, West Germany; Pflanzenbau und Pflanzenschutz 21791
- Mayer, K**  
Institut fur Zoologie, Berlin-Dahlem; Bundesanstalt fur Land- und Forstwirtschaft 21981
- Maynard, D N**  
Massachusetts Univ., Amherst 21891
- McCracken, F I**  
U. S. Forest Service, Stoneville, Mississippi 22220
- McDaniel, B**  
South Dakota State University, Brookings; Entomology-Zoology Dept. 21626
- McDowell, L L**  
State Univ. College of Forestry, East Lansing, Mich.; Dept. of Forest Botany and Pathology 22221
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Canada Dept. of Forestry and Rural Development, Calgary; Alberta; Forest Research Lab. 21703
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North Dakota State Univ., Fargo; Dept. of Veterinary Science 22113
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Guelph Univ., Ontario 21792
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Canada Dept. of Agriculture, Chatham, Ontario; Entomology Laboratory 21704
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Infestation Control Laboratory, Worpleston, England; Ministry of Agriculture 21586
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Agricultural Research Service, Ames, Iowa; National Animal Disease Lab. 22114
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Agricultural Coll. and Research Inst., Vellayani; Trivandrum, India 21892
- Meronuck, R A**  
Minnesota University, St. Paul; Dept. of Plant Pathology 21893
- Merry, D M E**  
Department of Agriculture, Pukekohe, New Zealand 22018
- Meyer, J**  
Husum 22019
- Meyer, J A**  
L'universite de Louvain, Heverlee, Belique; Faculte des Sciences Agronomiques; Laboratoire de Phytopathologie et de Mycologie 21894
- Milazzo, F H**  
Queen's Univ., Kingston, Ontario, Canada; Dept. of Microbiology and Immunology 21895
- Mital, V P**  
Rajasthan Coll. Of Agriculture, Udaipur, Agra; Dept. of Zoology and Entomology 21706
- Mital, V P**  
Rajasthan Coll. of Agriculture, Udaipur, India; Dept. of Zoology and Entomology 21982
- Mitsuhashi, J**  
National Institute of Agricultural Sciences, Tokyo 21707
- Miyatake, M**  
Ehime University, Matsuyama, Japan; Entomological Laboratory 21627
- Mohanty, G C**  
Agricultural Research Service, Greenport, N. Y.; Plum Island Animal Disease Lab. 22115
- Molloy, B P J**  
Department of Agriculture, Christchurch, New Zealand 22020
- Monaco, T J**  
North Carolina State University, Raleigh 22021
- Moradeshaghi, M J**  
Utah State Univ., Logan 21708
- Morimoto, T.**  
National Inst. of Animal Health, Tokyo, Japan 22116
- Moulton, J**  
California Univ., Davis; Dept. of Pathology 22117
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Department of Agriculture, Dubbo, Australia 22118
- Nachtigall, W**  
Zoologisches Institut der Universitat, Munchen 21709
- Nair, K S S**  
M. S. Baroda University, Baroda, India; Dept of Zoology; Division of Entomology 21710
- Naito, A**  
Central Agricultural Experiment Station, Konosu 21711
- Nakasono, K**  
National Institute of Agricultural Sciences, Tokyo, 21712
- Nakata, M**  
Nihon Tokusho Noyaku Seizo Company Ltd., Tokyo, Japan; Agricultural Chemicals Institute 22185
- Naqui, S N H**  
Pakistan Council of Scientific and Industrial Research; Karachi, Pakistan; Pesticide Section 21713
- Negm, A A G**  
Louisiana State Univ. and Agricultural and Mechanical Coll; Baton Rouge. 21714

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Negrobov, O P

Negrobov, O P  
USSR Academy of Sciences, Leningrad; Inst. of Zoology  
21628

Netto, L P  
Instituto Biologico, Sao Paulo, Brazil; Plano de Controle da Febre aftosa  
22120

Neururer, H  
Bundesanstalt fur Pflanzenschutz, Wien  
22022

Newberne, P M  
Massachusetts Inst. of Technology, Cambridge; Dept. of Nutrition and Food Science  
22121

Nickerson, B  
College of Technology, Leicester; Dept. of Biology  
21715

Nigam, S K  
United Provinces Coll. Of Veterinary Sciences, Mathura; Dept. of Pathology  
22122

Nijholt, W W  
Canada Dept. of Forestry and Rural Development, Victoria; British Columbia; Forest Research Lab.  
21587

Noronha-Wagner, M  
Estacao Agronomica Nacional; Dept. of Genetics  
21906

Norris, R F  
Michigan State Univ., East Lansing  
21793

Nuorteva, M  
Helsinki Univ., Finland; Inst. for Agricultural and Forest Zoology  
21716

Nuorteva, M  
Helsinki Univ., Finland; Landwirtschafts- And Forstzoologisches Inst.  
21985

Nuorteva, P  
Helsinki Univ., Finland; Zoological Museum  
21717

Nuorteva, P  
Helsinki Univ., Finland; Zoological Museum  
21986

Obrero, F P  
Philippines Univ. Coll. of Agriculture, Laguna; Dept. of Plant Pathology  
21907

Obrtel, R  
Forage Plants Research Station, Troubsko u Brna  
21987

Ogden, J C  
Stanford Univ., Calif.  
21761

Okasha, A Y K  
Assiut University, Egypt; Dept of Zoology  
21718

Opel, H  
Deutsche Akademie der Landwirtschaftswissenschaften, Berlin; Institut fur Phytopathologie  
21908

Owen, N V  
Eli Lilly and Co., Greenfield, Ind.  
22123

Owen, N V  
Eli Lilly and Co., Greenfield, Ind.  
22124

Ozkan, M  
Zirai Mucadele Enstitusu Tarla Bitkileri Hastaliklari; Laboratuvari, Ankara  
21910

Ozturk, S  
Zirai Mucadele Ilac ve Aletleri Enstitusu Fizikii Analiz; Ankara  
22237

Padmanabhan, S 4  
Central Rice Research Inst., Cuttack, India  
21911

Pady, S M  
Kansas State University, Manhattan; Division of Biology  
22222

Palevody, C  
Faculte des Sciences, Dijon, France; Lab. de Biologie animale et generale  
21719

Palmer-Jones, T  
Wallaceville Animal Research Centre, Wellington, New Zealand  
21988

Pandotra, V R  
Regional Research Lab., Jammu, India  
21912

Papavizas, G C  
U. S. Dept. of Agriculture, Beltsville, Maryland; Agricultural Research Service; Crops Research Division  
21913

Parmelee, J A  
Canada Dept. of Agriculture, Ottawa; Plant Research Inst.  
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Pasfield, G  
Department of Agriculture, Rydalmere, Australia; Entomology Branch  
21720

Pasquali-Ronchetti, I  
Modena Univ., Italy; Inst. of General Pathology  
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Patrascu, I  
I. C. V. B. pasteur; Lab. veterinar, Bacau, Romania  
22125

Pease, R W  
G. and C. Merrimam Co., Springfield, Mass.  
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Perrett, W J  
Department of Agriculture, New South Wales, Australia  
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Petrosini, G  
Consiglio Nazionale delle Richerch, Perugia, Italy; Centro di Studio per gli Antiparassitari  
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Pharis, R P  
Calgary Univ., Alberta, Canada; Dept. of Biology  
22223

Pielou, D P  
Canada Dept. of Agriculture, Ottawa; Entomology Research Inst.  
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Pike, L M  
Texas A Oand M Univ., College Station  
21794

Platt, A P  
Wesleyan Univ., Middletown, Conn.; Dept. of Biology  
21763

Polatnick, J  
Agricultural Research Service, Greenport, N Y; Animal Disease and Parasite Research Division; Plum Island Animal Disease Laboratory  
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Poos, J A J  
Plant Breeding Station C.I.V., Ottersum, Netherlands  
21915

Popham, E J  
Salford University, England; Dept. of Biology  
21630

Pratt, C  
New York Experiment Station, Geneva  
21795

Pridantseva, Ye A  
Moscow State Univ., USSR; Dept. of Entomology  
22154

Pristavko, V P  
Ukrainian Research Inst. of Plant Protection, Kiev, USSR  
21990

Pugh, G W  
Agricultural Research Service, Ames, Iowa; National Animal Disease Lab.  
22127

Puthz, V  
Berlin, Germany  
21631

Putman, A R  
Michigan State University, east Lansing  
22023

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West Pakistan Agricultural Univ., Lyallpur  
21723

Quennedey, A  
Faculte des Sciences, Dijon, France; Lab de Zoologie  
21724

Quimby, P C  
North Dakota State University, Fargo  
22024

Radova, E  
Institute of Epidemiology and Microbiology, Prague; Czechoslovakia  
22199

Raggi, V  
Universita di Perugia; Inst. di Patologia Vegetale  
21916

Ramade, F  
Institut National Agronomique, P ris, France; Lab. de Zoologie  
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Rangaiah, P K  
Agricultural Coll. and Research Inst., Coimbatore, India  
22025

Ransom, J P  
New England Inst. for Medical Research, Ridgefield, Conn.  
22128

Rao, V P  
Commonwealth Inst. of Biological Control, Bangalore, India  
21991

Rautapaa, J  
Agricultural Research Centre, Tikkurila, Finland; Dept. of Pest Investigation  
21992

Read, C P  
Rice Univ., Houston, Texas; Dept. of Biology  
22171

Read, D C  
Western Ontario University, London, Canada; Dept. of Zoology  
21993

Read, P E  
Minnesota Univ. St. Paul  
21796

Reedy, M K  
California Univ., Los Angeles; School of Medicine; Dept. of Physiology  
21726

Refatti, E  
Milano Univ., Italy; Inst. di Patologia Vegetale  
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Refatti, E  
Milano Univ., Italy; Inst. di Patologia Vegetale  
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Hebrew Univ., Rehovot, Israel; Faculty of Agriculture  
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Richards, A B  
California Agricultural Extension Service, Bakersfield  
22026

Ries, S K  
Michigan State Univ., East Lansing  
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Ringoe, A  
Association Euratom-Ital, Wageningen, Netherlands  
22041

Roberts, E D  
Rockefeller Foundation, Colombia, South America; Colombian Agricultural Program  
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Robinson, D M  
Oxford Univ.; Hope Dept. of Zoology  
21632

Roche, G  
National Museum of Ireland, Dublin; Dept. of Natural History  
21727

Rodriguez-Kabana, R  
Auburn University, Alabama  
22224

Roehrich, R  
Institut National de la Recherche Agronomique; Pont-de-la-Maye, France; Station de Zoologie Agricole du Sud-Ouest  
21728

Roelofs, W L  
New York State Agricultural Experiment Station, Geneva  
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Rovner, R S  
Johannes-Gutenberg Univ., Mainz, West Germany; Institut Fuer Allgemeine Zoologie  
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Threadgold, L T

- Roy, A K  
Department of Agriculture, Jorhat, India  
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- Ruegg, J C  
Max-Planck Inst. for Medical Research,  
Heidelberg, Germany; Dept. of Physiology  
21732
- Russ, K  
Bundesanstalt fur Pflanzenschutz, Wien  
21797
- Ryder, E J  
U S Dept of Agriculture, Salinas, Calif.  
21923
- Sanchez Potes, A  
Universidad Nacional, Palmira, Colombia; Facul-  
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- Sanchez, R A  
Buenos Aires Univ., Argentina; Faculty of Agrono-  
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- Sandoval, B  
Escuela Nacional de Ciencias Biologicas, Mexico;  
Dept. de Microbiologia  
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- Sanger, J W  
Pennsylvania University Medical School, Philadel-  
phia; Dept of Anatomy  
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Wisconsin Univ., Madison; Dept. of Forestry  
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Zamaboanga Normal Coll., Phillippines; Dept. of  
Science and Mathematics  
21924
- Schade, C  
Martin Luther Univ., Halle, East Germany; Ab-  
teilung Vrusserologie  
21925
- Scherney, F  
Bayerischen Landesanstalt fuer Bodenkultur,  
Pflanzenbau; und Pflanzenschutz, Muenchen, West  
Germany; Abteilung Zoologie  
21734
- Schindler, A F  
Division of Microbiology, Food and Drug Adminis-  
tration.; Washington, D. C.  
21798
- Schluger, Ye G  
USSR Academy of Medical Sciences, Moscow;  
Dept. of Infections with Natural Foci  
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- Schreier, O  
Bundesanstalt fur Pflanzenschutz, Wien  
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- Schroeder, H W  
Agricultural Research Service, College Station;  
Market Quality Research Division  
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- Schroeder, W F  
Illinois Univ., Urbana; Dept. of Veterinary Patholo-  
gy and Hygiene  
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- Schumakov, E M  
Leningrad, United Soviet Socialist Republic  
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- Schuster, G  
Karl Marx Univ., Leipzig, East Germany; Abteilung  
Landwirtschaftliche Botanik  
21927
- Schwenke, W  
Institut fuer Angewandte Zoologie, Muenchen,  
West Germany; Forstliche Forschungsanstalt  
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- Scott, F W  
Cornell Univ., Ithaca, N. Y.; Dept. of Microbiology  
22132
- Scott, H A  
U S Dept of Agriculture, Beltsville, Md; Agricul-  
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Plant Virology Laboratory  
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- Sharpe, R H  
California University, Davis  
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- Shaw, D E  
Department of Agriculture, Stock and Fisheries,  
Port; Moresby, Papua  
21929
- Sheikh, S A  
West Pakistan Veterinary Research Inst., Lahore  
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- Sheldrake, A R  
Cambridge Univ., England; Department of  
Biochemistry  
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- Sheldrake, R  
Cornell Univ., Ithaca, N. Y.  
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California Univ., Davis  
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Tuskegee Inst., Ala.; Dept. of Veterinary  
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National Communicable Disease Center, Atlanta,  
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U S Dept of Agriculture, Beltsville, Md  
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Faculte des Sciences, Orsay, France  
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U S Dept of Agriculture, Peoria, Illinois; Northern  
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Canada Dept. of Agriculture, 25 Dafee Road, Win-  
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